

**Calendar No. 493**116TH CONGRESS  
2D SESSION**S. 2525**

To require the Director of the National Institute of Standards and Technology to conduct a study of personal protective equipment worn by firefighters to determine the prevalence and concentration of per- and polyfluoroalkyl substances, and for other purposes.

---

**IN THE SENATE OF THE UNITED STATES**

SEPTEMBER 19, 2019

Mrs. SHAHEEN (for herself and Mr. GARDNER) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

JULY 22, 2020

Reported by Mr. WICKER, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

---

**A BILL**

To require the Director of the National Institute of Standards and Technology to conduct a study of personal protective equipment worn by firefighters to determine the prevalence and concentration of per- and polyfluoroalkyl substances, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Guaranteeing Equip-  
3 ment Safety for Firefighters Act of 2019”.

4 **SEC. 2. NATIONAL INSTITUTE OF STANDARDS AND TECH-**  
5 **NOLOGY STUDY ON PER- AND**  
6 **POLYFLUOROALKYL SUBSTANCES IN PER-**  
7 **SONAL PROTECTIVE EQUIPMENT WORN BY**  
8 **FIREFIGHTERS.**

9 (a) **IN GENERAL.**—Not later than 90 days after the  
10 enactment of this Act, the Director of the National Insti-  
11 tute of Standards and Technology shall, in consultation  
12 with the Director of the National Institute for Occupa-  
13 tional Safety and Health, commence a study of the con-  
14 tents and composition of new and unused personal protec-  
15 tive equipment worn by firefighters.

16 (b) **CONTENTS OF STUDY.**—In carrying out the study  
17 required by subsection (a), the Director of the National  
18 Institute of Standards and Technology shall examine—

19 (1) the identity, prevalence, and concentration  
20 of per- and polyfluoroalkyl substances (commonly  
21 known as “PFAS”) in the personal protective equip-  
22 ment worn by firefighters;

23 (2) the conditions and extent to which per- and  
24 polyfluoroalkyl substances are released into the envi-  
25 ronment over time from the degradation of personal

1 protective equipment from normal use by fire-  
2 fighters; and

3 ~~(3) the relative risk of exposure to per- and~~  
4 ~~polyfluoroalkyl substances faced by firefighters~~  
5 ~~from—~~

6 ~~(A) their use of personal protective equip-~~  
7 ~~ment; and~~

8 ~~(B) degradation of personal protective~~  
9 ~~equipment from normal use by firefighters.~~

10 ~~(c) REPORT.—Not later than 1 year after the date~~  
11 ~~of the enactment of this Act, the Director shall submit~~  
12 ~~to Congress a report describing—~~

13 ~~(1) the findings of the Director with respect to~~  
14 ~~the study carried out under subsection (a); and~~

15 ~~(2) recommendations on what additional re-~~  
16 ~~search or technical improvements to personal protec-~~  
17 ~~tive equipment materials or components should be~~  
18 ~~pursued to avoid unnecessary occupational exposure~~  
19 ~~among firefighters to per- and polyfluoroalkyl sub-~~  
20 ~~stances through personal protective equipment.~~

1 **SEC. 3. RESEARCH ON PER- AND POLYFLUOROALKYL SUB-**  
 2 **STANCES IN PERSONAL PROTECTIVE EQUIP-**  
 3 **MENT WORN BY FIREFIGHTERS.**

4 (a) **IN GENERAL.**—Not later than 540 days after the  
 5 date of the enactment of this Act, the Director of the Na-  
 6 tional Institute of Standards and Technology shall—

7 (1) issue a solicitation for research proposals to  
 8 carry out the research recommendations identified in  
 9 the report submitted under section 2(c); and

10 (2) award grants to applicants that submit re-  
 11 search proposals to develop safe alternatives to per-  
 12 and polyfluoroalkyl substances in personal protective  
 13 equipment.

14 (b) **CRITERIA.**—The Director shall select research  
 15 proposals to receive a grant under subsection (a) on the  
 16 basis of merit, using criteria identified by the Director,  
 17 including the likelihood that the research results will ad-  
 18 dress the findings of the Director with respect to the study  
 19 conducted under section 2(a).

20 (c) **ELIGIBLE ENTITIES.**—Any entity or group of 2  
 21 or more entities may submit to the Director a research  
 22 proposal in response to the solicitation for research pro-  
 23 posals under subsection (a), including—

24 (1) State and local agencies;

25 (2) public institutions, including public institu-  
 26 tions of higher education;

1           (3) private corporations; and

2           (4) nonprofit organizations.

3       (d) FUNDING.—

4           (1) REQUESTS.—Beginning in the first full fis-  
5       cal year following the date of the enactment of this  
6       Act, and not less frequently than once each year  
7       thereafter for 2 years, the Director may request  
8       such funding as the Director considers necessary to  
9       carry out this section.

10          (2) LIMITATION.—In carrying out this section,  
11       the Director may not expend or obligate more than  
12       \$5,000,000 in any 1 fiscal year.

13 **SEC. 4. AUTHORITY FOR DIRECTOR OF THE NATIONAL IN-**  
14                   **STITUTE OF STANDARDS AND TECHNOLOGY**  
15                   **TO CONSULT WITH EXPERTS ON MATTERS**  
16                   **RELATING TO PER- AND POLYFLUOROALKYL**  
17                   **SUBSTANCES.**

18       In carrying out this Act, the Director of the National  
19       Institute of Standards and Technology may consult with  
20       Federal agencies, nongovernmental organizations, State  
21       and local governments, and science and research institu-  
22       tions determined by the Director to have scientific or ma-  
23       terial interest in reducing unnecessary occupational expo-  
24       sure to per- and polyfluoroalkyl substances by firefighters.

1 **SECTION 1. SHORT TITLE.**

2       *This Act may be cited as the “Guaranteeing Equip-*  
 3 *ment Safety for Firefighters Act of 2019”.*

4 **SEC. 2. NATIONAL INSTITUTE OF STANDARDS AND TECH-**  
 5                   **NOLOGY     STUDY     ON     PER-     AND**  
 6                   **POLYFLUOROALKYL SUBSTANCES IN PER-**  
 7                   **SONAL PROTECTIVE EQUIPMENT WORN BY**  
 8                   **FIREFIGHTERS.**

9       *(a) IN GENERAL.—Not later than 3 years after the*  
 10 *date of the enactment of this Act, the Director of the Na-*  
 11 *tional Institute of Standards and Technology shall, in part-*  
 12 *nership with the Director of the National Institute for Occu-*  
 13 *pational Safety and Health, complete a study of the con-*  
 14 *tents and composition of new and unused personal protec-*  
 15 *tive equipment worn by firefighters.*

16       *(b) CONTENTS OF STUDY.—In carrying out the study*  
 17 *required by subsection (a), the Director of the National In-*  
 18 *stitute of Standards and Technology shall examine—*

19           *(1) the identity, prevalence, and concentration of*  
 20           *per- and polyfluoroalkyl substances (commonly known*  
 21           *as “PFAS”) in the personal protective equipment*  
 22           *worn by firefighters;*

23           *(2) the conditions and extent to which per- and*  
 24           *polyfluoroalkyl substances are released into the envi-*  
 25           *ronment over time from the degradation of personal*

1 *protective equipment from normal use by firefighters;*  
2 *and*

3 *(3) the relative risk of exposure to per- and*  
4 *polyfluoroalkyl substances faced by firefighters from—*

5 *(A) their use of personal protective equip-*  
6 *ment; and*

7 *(B) degradation of personal protective*  
8 *equipment from normal use by firefighters.*

9 *(c) REPORTS.—*

10 *(1) PROGRESS REPORTS.—Not less frequently*  
11 *than once each year for the duration of the study con-*  
12 *ducted under subsection (a), the Director shall submit*  
13 *to Congress a report on the progress of the Director*  
14 *in conducting such study.*

15 *(2) FINAL REPORT.—Not later than 90 days*  
16 *after the date on which the Director completes the*  
17 *study required by subsection (a), the Director shall*  
18 *submit to Congress a report describing—*

19 *(A) the findings of the Director with respect*  
20 *to the study; and*

21 *(B) recommendations on what additional*  
22 *research or technical improvements to personal*  
23 *protective equipment materials or components*  
24 *should be pursued to avoid unnecessary occupa-*  
25 *tional exposure among firefighters to per- and*

1            *polyfluoroalkyl substances through personal pro-*  
2            *TECTIVE EQUIPMENT.*

3    **SEC. 3. RESEARCH ON PER- AND POLYFLUOROALKYL SUB-**  
4            **STANCES IN PERSONAL PROTECTIVE EQUIP-**  
5            **MENT WORN BY FIREFIGHTERS.**

6            (a) *IN GENERAL.*—*Not later than 180 days after the*  
7            *date of the submittal of the report required by section*  
8            *2(c)(2), the Director of the National Institute of Standards*  
9            *and Technology shall—*

10            (1) *issue a solicitation for research proposals to*  
11            *carry out the research recommendations identified in*  
12            *the report submitted under section 2(c); and*

13            (2) *award grants to applicants that submit re-*  
14            *search proposals to develop safe alternatives to per-*  
15            *and polyfluoroalkyl substances in personal protective*  
16            *equipment.*

17            (b) *CRITERIA.*—*The Director shall select research pro-*  
18            *posals to receive a grant under subsection (a) on the basis*  
19            *of merit, using criteria identified by the Director, including*  
20            *the likelihood that the research results will address the find-*  
21            *ings of the Director with respect to the study conducted*  
22            *under section 2(a).*

23            (c) *ELIGIBLE ENTITIES.*—*Any entity or group of 2 or*  
24            *more entities may submit to the Director a research pro-*



1 *posal in response to the solicitation for research proposals*  
 2 *under subsection (a), including—*

- 3           (1) *State and local agencies;*  
 4           (2) *public institutions, including public institu-*  
 5 *tions of higher education;*  
 6           (3) *private corporations; and*  
 7           (4) *nonprofit organizations.*

8 *(d) AUTHORIZATION OF APPROPRIATIONS.—*

9           (1) *IN GENERAL.—There is authorized to be ap-*  
 10 *propriated to the Director such sums as may be nec-*  
 11 *essary to carry out this section.*

12           (2) *SUPPLEMENT NOT SUPPLANT.—Funds made*  
 13 *available to carry out this section shall supplement*  
 14 *and not supplant funds made available to the Direc-*  
 15 *tor for other purposes.*

16 **SEC. 4. AUTHORITY FOR DIRECTOR OF THE NATIONAL IN-**  
 17 **STITUTE OF STANDARDS AND TECHNOLOGY**  
 18 **TO CONSULT WITH EXPERTS ON MATTERS RE-**  
 19 **LATING TO PER- AND POLYFLUOROALKYL**  
 20 **SUBSTANCES.**

21 *In carrying out this Act, the Director of the National*  
 22 *Institute of Standards and Technology may consult with*  
 23 *Federal agencies, nongovernmental organizations, State*  
 24 *and local governments, and science and research institu-*  
 25 *tions determined by the Director to have scientific or mate-*

- 1 *rial interest in reducing unnecessary occupational exposure*
- 2 *to per- and polyfluoroalkyl substances by firefighters.*



**Calendar No. 493**

116<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

**S. 2525**

---

---

**A BILL**

To require the Director of the National Institute of Standards and Technology to conduct a study of personal protective equipment worn by firefighters to determine the prevalence and concentration of per- and polyfluoroalkyl substances, and for other purposes.

---

---

JULY 22, 2020

Reported with an amendment