

118TH CONGRESS
1ST SESSION

S. 466

To provide for the National Academies of Sciences, Engineering, and Medicine to study and report on a Federal research agenda to advance the understanding of perfluoroalkyl and polyfluoroalkyl substances, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 16, 2023

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

A BILL

To provide for the National Academies of Sciences, Engineering, and Medicine to study and report on a Federal research agenda to advance the understanding of perfluoroalkyl 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,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Federal PFAS Re-
5 search Evaluation Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

1 (1) perfluoroalkyl and polyfluoroalkyl sub-
2 stances are a group of manmade chemicals that have
3 been used in a wide range of products since the
4 1940s, including firefighting foam, carpeting, pack-
5 aging, and cookware;

6 (2) there are more than 5,000 types of reg-
7 istered perfluoroalkyl and polyfluoroalkyl substances;

8 (3) perfluoroalkyl and polyfluoroalkyl sub-
9 stances are not currently regulated at the Federal
10 level;

11 (4) perfluoroalkyl and polyfluoroalkyl sub-
12 stances—

13 (A) have been detected in air, water, soil,
14 food, biosolids, and more, where they persist for
15 a long time;

16 (B) can accumulate and remain in the
17 human body and in wildlife and other biota for
18 a long time; and

19 (C) can lead to serious health effects, in-
20 cluding cancer, low infant birthweight, liver and
21 kidney issues, reproductive and developmental
22 problems, and more;

23 (5) there remains much unknown about—

24 (A) the toxicity, human and environmental
25 health effects, exposure pathways, and effective

1 removal, treatment, and destruction methods of
2 perfluoroalkyl and polyfluoroalkyl substances;
3 and

4 (B) safe alternatives to perfluoroalkyl and
5 polyfluoroalkyl substances;

6 (6) Federal research efforts have been frag-
7 mented at various Federal agencies and have strug-
8 gled to effectively address the full scope of chal-
9 lenges presented by perfluoroalkyl and
10 polyfluoroalkyl substances;

11 (7) regulatory action and cleanup with respect
12 to perfluoroalkyl and polyfluoroalkyl substances de-
13 pend on—

14 (A) scientific analysis of toxicity data of
15 perfluoroalkyl and polyfluoroalkyl substances;

16 (B) decision making on how best to deal
17 with the thousands of perfluoroalkyl and
18 polyfluoroalkyl substances; and

19 (C) understanding the significance of the
20 many exposure pathways for perfluoroalkyl and
21 polyfluoroalkyl substances that exist; and

22 (8) a consensus study by the National Acad-
23 emies would help inform decisions by the Federal
24 Government, State governments, industry, and other

1 stakeholders on how to best address perfluoroalkyl
2 and polyfluoroalkyl substances.

3 **SEC. 3. DEFINITIONS.**

4 In this Act:

5 (1) ADMINISTRATOR.—The term “Adminis-
6 trator” means the Administrator of the Environ-
7 mental Protection Agency.

8 (2) DIRECTOR.—The term “Director” means
9 the Director of the National Science Foundation.

10 (3) NATIONAL ACADEMIES.—The term “Na-
11 tional Academies” means the National Academies of
12 Sciences, Engineering, and Medicine.

13 **SEC. 4. NATIONAL ACADEMIES REPORTS.**

14 (a) RESEARCH ASSESSMENTS OF PFAS EXPOSURE
15 AND TOXICITY.—

16 (1) IN GENERAL.—Not later than 90 days after
17 the date of enactment of this Act, the Director, in
18 consultation with the Administrator, the Secretary
19 of Defense, the Director of the National Institutes
20 of Health, and the heads of other Federal agencies
21 with expertise relevant to understanding exposure to
22 and toxicity of perfluoroalkyl and polyfluoroalkyl
23 substances, shall enter into an agreement with the
24 National Academies—

1 (A) to conduct a 2-phase study in accord-
2 ance with this subsection to identify research
3 and development needed to advance human ex-
4 posure estimations and toxicity and hazard esti-
5 mations of individual perfluoroalkyl and
6 polyfluoroalkyl substances or perfluoroalkyl and
7 polyfluoroalkyl substances collectively; and

8 (B) to submit reports describing the re-
9 sults of the studies in accordance with this sub-
10 section.

11 (2) PHASE I STUDY AND REPORT ON HUMAN
12 EXPOSURE ESTIMATION.—

13 (A) IN GENERAL.—The phase I study
14 under paragraph (1) shall, at a minimum—

15 (i) consider lifecycle information on
16 the manufacture, use, and disposal of
17 products containing perfluoroalkyl and
18 polyfluoroalkyl substances to identify po-
19 tential human exposure sources and path-
20 ways;

21 (ii) evaluate—

22 (I) the fate and transport of
23 perfluoroalkyl and polyfluoroalkyl sub-
24 stances; and

1 (II) the breakdown products of
2 perfluoroalkyl and polyfluoroalkyl sub-
3 stances, as related to human expo-
4 sure;

5 (iii) if feasible, estimate human expo-
6 sure to individual perfluoroalkyl and
7 polyfluoroalkyl substances or perfluoroalkyl
8 and polyfluoroalkyl substances collectively
9 to determine relative source contributions
10 for various exposure pathways (such as air,
11 water, soil, or food);

12 (iv) determine which perfluoroalkyl
13 and polyfluoroalkyl substances are most
14 likely to contribute to human exposure;
15 and

16 (v) identify research that is needed to
17 advance exposure estimations to individual
18 perfluoroalkyl and polyfluoroalkyl sub-
19 stances or perfluoroalkyl and
20 polyfluoroalkyl substances collectively.

21 (B) REPORT.—Not later than 1 year after
22 the date on which the agreement described in
23 paragraph (1) is finalized, the National Acad-
24 emies shall—

1 (i) submit to Congress a report con-
2 taining the findings and recommendations
3 of the study described in subparagraph
4 (A); and

5 (ii) make the report under clause (i)
6 available on a publicly accessible website.

7 (3) PHASE II STUDY AND REPORT ON PFAS
8 TOXICITY AND HAZARD ESTIMATION.—

9 (A) IN GENERAL.—The phase II study
10 under paragraph (1) shall, at a minimum—

11 (i)(I) review animal and human tox-
12 icity information on the perfluoroalkyl and
13 polyfluoroalkyl substances most likely to
14 contribute to human exposure, as identified
15 in the phase I report under paragraph
16 (2)(B)(i); and

17 (II) develop an approach for con-
18 ducting a human health hazard assessment
19 of the identified perfluoroalkyl and
20 polyfluoroalkyl substances;

21 (ii) give consideration as to whether
22 chemical category-based approaches for as-
23 sessing hazards would be appropriate for
24 evaluating perfluoroalkyl and
25 polyfluoroalkyl substances as a group; and

1 (iii) identify research that is needed to
2 advance toxicity and hazard assessments of
3 individual perfluoroalkyl and
4 polyfluoroalkyl substances or perfluoroalkyl
5 and polyfluoroalkyl substances collectively.

6 (B) REPORT.—Not later than 1 year after
7 the date on which the phase I report is sub-
8 mitted to Congress under paragraph (2)(B)(i),
9 the National Academies shall—

10 (i) submit to Congress a report con-
11 taining the findings and recommendations
12 of the study described in subparagraph
13 (A); and

14 (ii) make the report under clause (i)
15 available on a publicly accessible website.

16 (b) RESEARCH ASSESSMENTS OF MANAGEMENT AND
17 TREATMENT ALTERNATIVES FOR PFAS CONTAMINATION
18 IN THE ENVIRONMENT AND DEVELOPMENT OF SAFE AL-
19 TERNATIVES.—

20 (1) IN GENERAL.—Not later than 90 days after
21 the date of enactment of this Act, the Director and
22 the Administrator, in consultation with the Sec-
23 retary of Defense and the heads of other Federal
24 agencies with expertise relevant to the development
25 of alternatives to perfluoroalkyl and polyfluoroalkyl

1 substances and the management and treatment of
2 perfluoroalkyl and polyfluoroalkyl substances, shall
3 jointly enter into an agreement with the National
4 Academies—

5 (A) to conduct a 2-phase study in accord-
6 ance with this subsection to better under-
7 stand—

8 (i) the research and development
9 needed to advance the understanding of
10 the extent and implications of environ-
11 mental contamination by perfluoroalkyl
12 and polyfluoroalkyl substances;

13 (ii) the best methods to manage and
14 treat that contamination; and

15 (iii) the development of safe alter-
16 natives to perfluoroalkyl and
17 polyfluoroalkyl substances; and

18 (B) to submit reports describing the re-
19 sults of the studies in accordance with this sub-
20 section.

21 (2) PHASE I STUDY AND REPORT ON TREAT-
22 MENT AND REMEDIATION.—

23 (A) IN GENERAL.—The phase I study
24 under paragraph (1) shall, at a minimum—

1 (i) assess the best available strategies
2 for treatment, site remediation, and safe
3 disposal of perfluoroalkyl and
4 polyfluoroalkyl substances; and

5 (ii) describe research gaps relating to
6 the issues described in clause (i), including
7 socioeconomic considerations and ways
8 that the Federal Government can address
9 the research needs.

10 (B) REPORT.—Not later than 18 months
11 after the date on which the agreement described
12 in paragraph (1) is finalized, the National
13 Academies shall—

14 (i) submit to Congress a report con-
15 taining the findings and recommendations
16 of the study described in subparagraph
17 (A); and

18 (ii) make the report under clause (i)
19 available on a publicly accessible website.

20 (3) PHASE II STUDY AND REPORT ON ASSESS-
21 MENT OF SAFE ALTERNATIVES FOR PFAS.—

22 (A) IN GENERAL.—The phase II study
23 under paragraph (1) shall, at a minimum—

24 (i) examine the state of knowledge for
25 alternatives to perfluoroalkyl and

1 polyfluoroalkyl substances in applications
2 currently, as of the date of the study,
3 using perfluoroalkyl and polyfluoroalkyl
4 substances that contribute to significant
5 human health or ecological exposures and
6 potential risk; and

7 (ii) identify research needs to address
8 the highest priorities for development of al-
9 ternatives to perfluoroalkyl and
10 polyfluoroalkyl substances.

11 (B) REPORT.—Not later than 3 years after
12 the date on which the agreement described in
13 paragraph (1) is finalized, the National Acad-
14 emies shall—

15 (i) submit to Congress a report con-
16 taining the findings and recommendations
17 of the study described in subparagraph
18 (A); and

19 (ii) make the report under clause (i)
20 available on a publicly accessible website.

21 **SEC. 5. IMPLEMENTATION PLAN.**

22 (a) IN GENERAL.—Not later than 180 days after the
23 date on which all reports from the National Academies
24 under section 4 have been submitted to Congress, the Di-
25 rector of the Office of Science and Technology Policy, in

1 coordination with the heads of all relevant Federal agen-
2 cies, shall submit to Congress an implementation plan for
3 increased collaboration and coordination of Federal re-
4 search, development, and demonstration activities with re-
5 spect to perfluoroalkyl and polyfluoroalkyl substances.

6 (b) REQUIREMENT.—In preparing the implementa-
7 tion plan under subsection (a), the Director of the Office
8 of Science and Technology Policy shall take into consider-
9 ation the recommendations included in the reports sub-
10 mitted to Congress under section 4.

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