Message

From: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
Sent: 4/30/2019 9:57:49 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Hanley, Mary [Hanley.Mary@epa.gov]; Dunn, Alexandra [dunn.alexandra@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Tyler, Tom [Tyler.Tom@epa.gov]
Subject: RE: Draft Asbestos Ban Bill TA for OCSPP IO Review
Attachments: LiveRecovery save of Technical Assistance ARBAN.April 22 2019.nb.cb.draft.asd.docx

I've added to this.

From: Beck, Nancy
Sent: Tuesday, April 30, 2019 1:12 PM
To: Hanley, Mary <Hanley.Mary@epa.gov>; Dunn, Alexandra <dunn.alexandra@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>
Subject: RE: Draft Asbestos Ban Bill TA for OCSPP IO Review

My suggestions attached.

Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator, OCSPP
P: 202-564-1273
beck.nancy@epa.gov

From: Hanley, Mary
Sent: Tuesday, April 30, 2019 9:54 AM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>
Cc: Tyler, Tom <Tyler.Tom@epa.gov>; Reed, Kristen <Reed.Kristen@epa.gov>; Malloy, Ruth <malloy.ruth@epa.gov>
Subject: FW: Draft Asbestos Ban Bill TA for OCSPP IO Review

Hi. Attached for OCSPP IO review is draft TA that has been reviewed and cleared by OGC and OPPT IO for the attached draft asbestos ban bill from Suzanne Bonamici (D, OR 1st District). Jerry Couri Deputy Chief Counsel of HEC, Republican Staff requested that we provide this TA.
Kris, would you kindly print and distribute this morning to A, N, C and E. Many thanks!

Significant New Use Rule: a useful tool for chemical regulation

The US Environmental Protection Agency (EPA) is responsible for determining whether chemicals can be imported, produced, and used in the United States. The EPA approves new chemicals before they're allowed on the market, and it also reviews chemicals that are already in products or are otherwise used in the economy. When the EPA reviews a chemical for possible impacts to people and the environment, it looks at how the chemical is being used, or how it will be used if it's a new chemical. For most chemicals, the EPA makes its decisions under a law called the Toxic Substances Control Act, or TSCA.

Sometimes the EPA finds that the way a chemical currently is used in the United States is not of concern, but it believes that, at some point, new uses of the chemical that may not be safe could make their way into the US market. There are any number of reasons why the EPA may believe such new uses could show up. The chemical might be a substitute for other chemicals. Maybe it's approved for different uses in other countries. Or perhaps the chemical was once used in a certain way in this country and although it no longer is, it's possible that at some point there may be interest in bringing back that use. Unless the EPA has already prohibited the use, anyone would be free to start it back up in this country.

In such cases, the EPA may issue under TSCA what's called a significant new use rule, or SNUR. What a SNUR does is require anyone who wants to use a chemical in a new way to first show the EPA that the new use of the chemical is not of concern to people and the environment. Only if they can do so will the EPA allow it to enter the marketplace.

Let's look at an example. Makers of building materials like adhesives and floor tile once added asbestos to those products, but they haven't done so for many years. However, those uses are not banned and if anyone wanted to start importing asbestos-containing adhesives or floor tile, or to begin making them here, they could legally do so right now. However, there would be concerns with anyone restarting such uses because exposure to asbestos can cause serious diseases such as cancer. A SNUR would require anyone who wanted to import or make asbestos-containing building materials to notify the EPA of their intent to do so and show that the new use of asbestos-containing building materials would not be of concern.

This is exactly what the EPA has done with asbestos. We have proposed a TSCA rule saying that while adhesives, tile, and other certain asbestos uses are no longer in commerce in the United States, they have not been banned and may present concern if their use returned. Using its SNUR authority, the EPA is prohibiting the restart of these uses of asbestos unless they can be shown to not be of concern. While the SNUR is not a complete solution to addressing the health impacts of exposure to asbestos, it's a step in the right direction.

New uses of chemicals often not only are not of concern, but are welcome as serving new, valuable roles in the economy. Yet where existing uses are not a problem but there may be concerns with new uses, this little-known tool in the TSCA legal toolbox, the significant new use rule, can play an important role in chemicals regulation.

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 4/30/2019 1:53:33 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Tyler, Tom [Tyler.Tom@epa.gov]; Reed, Kristen [Reed.Kristen@epa.gov]; Malloy, Ruth [malloy.ruth@epa.gov]
Subject: FW: Draft Asbestos Ban Bill TA for OCSPP IO Review
Attachments: ABRAN bill.pdf; Technical Assistance ARBAN.April 22 2019.draft.docx

Hi. Attached for OCSPP IO review is draft TA that has been reviewed and cleared by OGC and OPPT IO for the attached draft asbestos ban bill from Suzanne Bonamici (D, OR 1st District). Jerry Couri Deputy Chief Counsel of HEC, Republican Staff requested that we provide this TA.
Kris, would you kindly print and distribute this morning to A, N, C and E. Many thanks!

.....

(Original Signature of Member)

116TH CONGRESS
1ST SESSION

H. R. _____

To amend the Toxic Substances Control Act to prohibit the manufacture, processing, and distribution in commerce of asbestos and asbestos-containing mixtures and articles, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Ms. BONAMICI introduced the following bill; which was referred to the Committee on _____

A BILL

To amend the Toxic Substances Control Act to prohibit the manufacture, processing, and distribution in commerce of asbestos and asbestos-containing mixtures and articles, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Alan Reinstein Ban Asbestos Now Act of 2019".

SEC. 2. ASBESTOS BAN AND REPORTING.

Section 6 of the Toxic Substances Control Act (15 U.S.C. 2605) is amended by adding at the end the following:

"(k) ASBESTOS.—

"(1) PROHIBITION OF MANUFACTURE, PROCESSING, AND DISTRIBUTION IN COMMERCE.—Effective one year after the date of enactment of this subsection, no person may manufacture, process, or distribute in commerce asbestos or any mixture or article containing asbestos.

"(2) EXEMPTION FOR NATIONAL SECURITY REASONS.—

"(A) IN GENERAL.—The President may, upon application, grant any person an exemption from the prohibition under paragraph (1) once for the manufacture, processing, or distribution in commerce of asbestos or any mixture or article containing asbestos only if the President determines that—

"(i) the manufacture, processing, or distribution in commerce of asbestos or any mixture or article containing asbestos by the person is necessary to protect the national security interests of the United States; and

"(ii) no feasible alternative to the manufacture, processing, or distribution in commerce of asbestos or any mixture or article containing asbestos exists for the intended use.

"(B) DURATION.—

"(i) IN GENERAL.—The period of an exemption granted under subparagraph (A) shall not exceed 3 years.

"(ii) EXTENSION.—The President may, in accordance with subparagraph (A), extend an exemption granted under such subparagraph once, for a period not to exceed 3 years.

"(C) TERMS AND CONDITIONS.—An exemption granted under this paragraph (including an extension thereof) shall include such terms and conditions as are necessary to achieve maximum practicable reduction in exposure to asbestos.

"(D) PUBLICATION.—

"(i) APPLICATIONS.—Not later than 30 days after receipt of an application for an exemption under this paragraph (including an extension thereof), the Presi-

1 dent shall publish the application in the
2 Federal Register.
3 "(ii) EXEMPTIONS.—Not later than
4 30 days after granting an exemption under
5 this paragraph (including an extension
6 thereof), the President shall publish in the
7 Federal Register notice of the exemption
8 and the terms and conditions included
9 under subparagraph (B).
10 "(E) APPLICATION OF WAIVER AUTHOR-
11 ITY.—Notwithstanding section 22, the Adminis-
12 trator may not issue a waiver under such sec-
13 tion with respect to asbestos.
14 "(3) REPORTS.—
15 "(A) TIMING AND COVERAGE.—
16 "(i) PREVIOUS ACTION.—Not later
17 than 120 days after the date of enactment
18 of this subsection, any person who has
19 manufactured, processed, or distributed in
20 commerce asbestos or any mixture or arti-
21 cle containing asbestos in the 36 months
22 preceding such date of enactment shall
23 submit to the Administrator a report de-
24 scribed in subparagraph (B).

"(ii) LATER ACTION.—Any person manufacturing, processing, or distributing in commerce asbestos or any mixture or article containing asbestos during the period that begins on the date of enactment of this subsection and ends on the date on which the prohibition under paragraph (1) takes effect shall submit to the Administrator a report described in subparagraph (B) not later than 60 days after—

"(I) the date of enactment of this subsection, for any person who has manufactured, processed, or distributed in commerce asbestos or any mixture or article containing asbestos before such date of enactment; or

"(II) the date on which the person initiates any such manufacture, processing, or distribution in commerce, for any person initiating such manufacturing, processing, or distribution in commerce on or after such date of enactment.

"(iii) REPORTS DURING EXEMPTED PERIOD.—Any person granted an exemp-

1 tion under paragraph (2) shall submit to
2 the Administrator a report described in
3 subparagraph (B) not later than 27
4 months after—
5 "(I) the exemption is granted;
6 and
7 "(II) the exemption is extended,
8 if applicable.
9 "(B) CONTENTS.—Each report submitted
10 under subparagraph (A) shall include—
11 "(i) the name and address of the per-
12 son submitting the report;
13 "(ii) the name, title, and contact in-
14 formation of an authorized representative
15 of the person submitting the report;
16 "(iii) the location of the facility or fa-
17 cilities where the manufacture, processing,
18 or distribution in commerce of asbestos or
19 mixtures or articles containing asbestos
20 has occurred, or will occur, during the re-
21 porting period;
22 "(iv) a description of the manufac-
23 ture, processing, or distribution activity
24 during the reporting period of the person
25 submitting the report, and the intended

and known uses of asbestos and each mixture or article containing asbestos by that person and all other persons to whom the asbestos, mixture, or article is sold or otherwise distributed in commerce;

"(v) the amount of asbestos, and the amount and concentration of asbestos in any mixture or article containing asbestos, that is manufactured, processed, or distributed in commerce, or expected to be manufactured, processed, or distributed in commerce, by the person during the reporting period;

"(vi) reasonable estimates of the amount of asbestos to be disposed of as a result of the reported manufacture, processing, or distribution activities, and the manner of such disposal; and

"(vii) reasonable estimates of—

"(I) the number of individuals who, as a result of the reported manufacture, processing, and distribution activities—

"(aa) have been exposed to asbestos or mixtures or articles containing asbestos; and

"(bb) will be so exposed; and

"(II) the nature, duration, frequency, and levels of any such exposure.

"(C) REPORTING PERIOD.—For purposes of subparagraph (B), the reporting period for a report submitted under—

"(i) subparagraph (A)(i) shall be the period that begins on the date that is 36 months prior to the date of enactment of this subsection and ends on the date of enactment of this subsection;

"(ii) subparagraph (A)(ii) shall be the period that begins on the date of enactment of this subsection and ends on the date on which the prohibition under paragraph (1) takes effect;

"(iii) subparagraph (A)(iii)(I) shall be the period that begins on the date on which an exemption is granted under paragraph (2) and ends on the date such ex-

1 emption expires (not including an exten-
2 sion thereof); and
3 "(iv) subparagraph (A)(iii)(II) shall
4 be the period that begins on the date on
5 which an exemption is extended under
6 paragraph (2) and ends on the date such
7 extension expires.
8 "(D) REPORTING FORMS AND INSTRUC-
9 TIONS.—Not later than 30 days after the date
10 of the enactment of this subsection, the Admin-
11 istrator shall publish a notice in the Federal
12 Register that provides instructions for reporting
13 under this paragraph and a form or forms for
14 use by persons submitting reports under this
15 paragraph.
16 "(E) AVAILABILITY.—Not later than 3
17 months after a report is submitted under sub-
18 paragraph (A), the Administrator shall make
19 such report available to the public.
20 "(F) SUMMARY AND ANALYSIS.—Not later
21 than 180 days after a report is submitted under
22 subparagraph (A), the Administrator shall
23 make available to the public a summary and
24 analysis of the information such report con-
25 tains.

"(4) DEFINITIONS.—In this subsection:

"(A) ASBESTOS.—The term 'asbestos' means—

"(i) the asbestiform varieties of chrysotile, actinolite, amosite, anthophyllite, crocidolite, richterite, winchite, and tremolite; and

"(ii) the non-asbestiform varieties of richterite and winchite.

"(B) DISTRIBUTE IN COMMERCE.—The terms 'distribute in commerce' and 'distribution in commerce' have the meaning given the terms in section 3(5), but, notwithstanding such section 3(5), do not include, with respect to asbestos—

"(i) end-use of a mixture or article containing asbestos and installed in a building or other structure before the date of enactment of this subsection; or

"(ii) distribution of a mixture or article containing asbestos solely for the purpose of disposal of the mixture or article in compliance with applicable Federal, State, and local requirements.

"(C) MIXTURE OR ARTICLE CONTAINING ASBESTOS.—The term 'mixture or article containing asbestos' includes a mixture or article in which asbestos is present as an impurity.".

SEC. 3. LEGACY ASBESTOS: REPORT AND RECOMMENDATIONS.

(a) REPORT.—Not later than 18 months after the date of the enactment of this Act, the Administrator of the Environmental Protection Agency, in consultation with the Secretary of Health and Human Services and the Secretary of Labor, shall prepare and submit to Congress a report assessing—

(1) the presence of asbestos in residential, commercial, industrial, public, and school buildings; and

(2) the extent of exposure and risk to human health associated with the asbestos present in such buildings from all commercial, industrial, and consumer activities that may result in asbestos exposure.

(b) CONTENTS.—The report required under subsection (a) shall be based upon the best available information, and information that can feasibly be obtained through surveys or other means, and shall provide the following:

(1) An estimate of the number of residential, commercial, industrial, public, and school buildings where asbestos is present.

(2) An estimate of the amount of asbestos in such buildings and the portion of such asbestos that is friable.

(3) A description of the types of building components and systems containing asbestos in such buildings and the categories of mixtures and articles containing asbestos that are present, such as thermal insulation, roofing materials, asbestos cement pipe, and asbestos cement sheet.

(4) For each category of building, an estimate of the number of people potentially exposed to asbestos, the conditions and activities with the greatest potential for exposure, and estimates of the levels of exposure.

(5) A description of the role of handling, maintenance, and construction practices in creating exposure to asbestos and the impact of building aging on the potential for asbestos exposure.

(6) An estimate of the amount of asbestos waste generated from building renovation, repair, and demolition for each of the last 5 years and the

1 procedures that are utilized for the handling, trans-
2 port, and disposal of such waste.
3 (c) RECOMMENDATIONS.—
4 (1) IN GENERAL.—The report submitted under
5 subsection (a) shall contain—
6 (A) an assessment of the sufficiency of ex-
7 isting statutes, regulations, policies, and pro-
8 grams, implemented by the Environmental Pro-
9 tection Agency, the Department of Labor, and
10 other agencies, in protecting against exposures
11 to legacy asbestos; and
12 (B) recommendations for modifications or
13 additions to such statutes, regulations, policies,
14 and programs, as necessary to reduce or elimi-
15 nate risks to human health.
16 (2) INCLUSIONS.—Recommendations under
17 paragraph (1)(B) may include recommendations for
18 new, additional, or modified statutes, regulations,
19 policies, or programs for—
20 (A) the inspection of buildings to deter-
21 mine the presence and condition of asbestos;
22 (B) inventorying the presence and condi-
23 tion of asbestos in buildings;
24 (C) removal of asbestos from buildings;

1 (D) handling asbestos during building
2 maintenance, repair, demolition, and other com-
3 mercial and industrial activities with the poten-
4 tial for asbestos exposure; and
5 (E) disposal of asbestos-containing waste
6 and debris.
7 (d) EFFECT ON EXISTING LAW.—Compliance with
8 this section shall not relieve the Administrator of the Envi-
9 ronmental Protection Agency, the Secretary of Health and
10 Human Services, or the Secretary of Labor, of any other
11 obligation arising under this Act or any other law.
12 (e) DEFINITION OF ASBESTOS.—In this section, the
13 term "asbestos" means—
14 (1) the asbestiform varieties of chrysotile, actin-
15 olite, amosite, anthophyllite, crocidolite, richterite,
16 winchite, and tremolite; and
17 (2) the non-asbestiform varieties of richterite
18 and winchite.

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<signature-line display="yes">(Original Signature of Member)</signature-line>

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<congress>116th CONGRESS</congress> <session>1st Session</session>

<legis-num>H. R. __</legis-num>

<current-chamber>IN THE HOUSE OF REPRESENTATIVES</current-chamber>

<action>

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<action-desc><sponsor name-id="B001278">Ms. Bonamici</sponsor> introduced the following bill; which was referred to the Committee on _____</action-desc>

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<official-title>To amend the Toxic Substances Control Act to prohibit the manufacture, processing, and distribution in commerce of asbestos and asbestos-containing mixtures and articles, and for other purposes.</official-title>

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<section id="HA8A205A7B9A9420594B63CDDE00A3E87" section-type="section-one"><enum>1.</enum><header>Short title</header><text display-inline="no-display-inline">This Act may be cited as the <quote><short-title>Alan Reinstein Ban Asbestos Now Act of 2019</short-title></quote>.</text></section>

<section id="HD367BE3AEFA2486AA3A669EEAC1337A3"><enum>2.</enum><header>Asbestos ban and reporting</header><text display-inline="no-display-inline">Section 6 of the Toxic Substances Control Act (15 U.S.C. 2605) is amended by adding at the end the following:</text>

<quoted-block style="OLC" display-inline="no-display-inline" id="HAC568B91D0BF4B4F99E5BFBA6BC7A2B8">

<subsection id="HFF81A12AF7B3490996DD7AEE374EBB89"><enum>(k)</enum><header>Asbestos</header>

<paragraph id="H01E8795358624D458C51C8EC0D25DF59"><enum>(1)</enum><header>Prohibition of manufacture, processing, and distribution in commerce</header><text>Effective one year after the date of enactment of this subsection, no person may manufacture, process, or distribute in commerce asbestos or any mixture or article containing asbestos.</text></paragraph>

<paragraph id="H4316BA1AF3644F788F0FBB4AB671FF2E"><enum>(2)</enum><header>Exemption for national security reasons</header>

<subparagraph id="H725FC5B854624F58ABC9F72AEA733785"><enum>(A)</enum><header>In general</header><text display-inline="yes-display-inline">The President may, upon application, grant any person an exemption from the prohibition under paragraph (1) once for the manufacture, processing, or distribution in commerce of asbestos or any mixture or article containing asbestos only if the President determines thatâ€"</text>

<clause id="H365C04C536CB494DB45DAB82FFFD5A75"><enum>(i)</enum><text>the manufacture, processing, or distribution in commerce of asbestos or any mixture or article containing asbestos by the person is necessary to protect the national security interests of the United States; and</text></clause>

<clause id="H1064FDE3E42C4995BFA8EA1C4A1B199A"><enum>(ii)</enum><text>no feasible alternative to the manufacture, processing, or distribution in commerce of asbestos or any mixture or article containing asbestos exists for the intended use.</text></clause></subparagraph>

<subparagraph id="H345DB09D9E2B4603AF10BA81C5504F25"><enum>(B)</enum><header>Duration</header>

<clause id="H2921F0AA3B954E299AD5CCD96820025E"><enum>(i)</enum><header>In general</header><text>The period of an exemption granted under subparagraph (A) shall not exceed 3 years.</text></clause>

<clause id="HA10EEB7B37C44F01AC9DAFE240ED0BAB"><enum>(ii)</enum><header>Extension</header><text>The President may, in accordance with subparagraph (A), extend an exemption granted under such subparagraph once, for a period not to exceed 3 years.</text></clause></subparagraph>

<subparagraph id="HC4F910CF4CDC4CDFB716584C32D1E33F"><enum>(C)</enum><header>Terms and conditions</header><text>An exemption granted under this paragraph (including an extension thereof) shall include such terms and conditions as are necessary to achieve maximum practicable reduction in exposure to asbestos.</text> </subparagraph>

<subparagraph id="HEB60900B676C46B89270A165F32FA3AC"><enum>(D)</enum><header>Publication</header><text/>

<clause id="H79B84EF57C1A4C0D8BEDC4F2385EA51E"><enum>(i)</enum><header>Applications</header><text display-inline="yes-display-inline">Not later than 30 days after receipt of an application for an exemption under this paragraph (including an extension thereof), the President shall publish the application in the Federal Register.</text></clause>

<clause id="H3216DECCE269453AB605CA2B8D8BDFEA"><enum>(ii)</enum><header>Exemptions</header><text display-inline="yes-display-inline">Not later than 30 days after granting an exemption under this paragraph (including an extension thereof), the President shall publish in the Federal Register notice of the exemption and the terms and conditions included under subparagraph (B).</text></clause></subparagraph>

<subparagraph id="H416185B7979243C48F0733BEE613DB0D" commented="no"><enum>(E)</enum><header>Application of waiver authority</header><text>Notwithstanding section 22, the Administrator may not issue a waiver under such section with respect to asbestos.</text> </subparagraph></paragraph>

<paragraph id="HB6BCB4A7455D4533989F14362E949B89"><enum>(3)</enum><header>Reports</header>

<subparagraph id="HA0C9A36D17E8498EBE578ECD95A5A442"><enum>(A)</enum><header>Timing and coverage</header>

<clause id="HEC742BCE9ADA4E2F91380B26BD2EDF00"><enum>(i)</enum><header>Previous action</header><text display-inline="yes-display-inline">Not later than 120 days after the date of enactment of this subsection, any person who has manufactured, processed, or distributed in commerce asbestos or any mixture or article containing asbestos in the 36 months preceding such date of enactment shall submit to the Administrator a report described in subparagraph (B).</text></clause>

<clause id="H4BD5F4039B79442E8DECCC1911D50A12" commented="no"><enum>(ii)</enum><header>Later action</header><text>Any person manufacturing, processing, or distributing in commerce asbestos or any mixture or article containing asbestos during the period that begins on the date of enactment of this subsection and ends on the date on which the prohibition under paragraph (1) takes effect shall submit to the Administrator a report described in subparagraph (B) not later than 60 days afterâ€"</text>

<subclause id="H1C6035D32B944DE3B5774C7664F69ED6" commented="no"><enum>(I)</enum><text display-inline="yes-display-inline">the date of enactment of this subsection, for any person who has manufactured, processed, or distributed in commerce asbestos or any mixture or article containing asbestos before such date of enactment; or</text></subclause>

<subclause id="HB38D5F4A0B124054A6DCFC6B90D65651" commented="no"><enum>(II)</enum><text>the date on which the person initiates any such manufacture, processing, or distribution in commerce, for any person initiating such manufacturing, processing, or distribution in commerce on or after such date of enactment.</text></subclause></clause>

<clause id="HF491061E44E841B6948145B7DA794A9F"><enum>(iii)</enum><header>Reports during exempted period</header><text display-inline="yes-display-inline">Any person granted an exemption under paragraph (2) shall submit to the Administrator a report described in subparagraph (B) not later than 27 months afterâ€"</text>

<subclause id="H30C9C956BF6540AFA6D737B08F13B7BA"><enum>(I)</enum><text>the exemption is granted; and</text></subclause>

<subclause id="HDFB0E80D0B134A76869AD4704535238E"><enum>(II)</enum><text display-inline="yes-display-inline">the exemption is extended, if applicable.</text></subclause></clause></subparagraph>

<subparagraph id="H9870B7C9F1E64F49ACB6AA5DCF69252D"><enum>(B)</enum><header>Contents</header><text>Each report submitted under subparagraph (A) shall includeâ€"</text>

<clause id="H9CBDB08AD35145F395749D804BF4EAD1"><enum>(i)</enum><text>the name and address of the person submitting the report;</text></clause>

<clause id="H3F233E0E4B1F4539AD1DD2CAD6FF4E07"><enum>(ii)</enum><text>the name, title, and contact information of an authorized representative of the person submitting the report;</text></clause>

<clause id="H5CFB87DE381F4F809605DDFB6DB4F3C4" commented="no"><enum>(iii)</enum><text>the location of the facility or facilities where the manufacture, processing, or distribution in commerce of asbestos or mixtures or articles containing asbestos has occurred, or will occur, during the reporting period;</text></clause>

<clause id="HCAC1BA3B1AA74C449ADACC2A1E02151D" commented="no"><enum>(iv)</enum><text display-inline="yes-display-inline">a description of the manufacture, processing, or distribution activity during the reporting period of the person submitting the report, and the intended and known uses of asbestos and each mixture or article containing asbestos by that person and all other persons to whom the asbestos, mixture, or article is sold or otherwise distributed in commerce; </text></clause>

<clause id="H3F177E4B64B04737BFB7BB9021BDFE4F"><enum>(v)</enum><text>the amount of asbestos, and the amount and concentration of asbestos in any mixture or article

containing asbestos, that is manufactured, processed, or distributed in commerce, or expected to be manufactured, processed, or distributed in commerce, by the person during the reporting period; </text></clause>

<clause id="HB321A6F8D97047B5A7D0F4B619D8627B" commented="no"><enum>(vi)</enum><text display-inline="yes-display-inline">reasonable estimates of the amount of asbestos to be disposed of as a result of the reported manufacture, processing, or distribution activities, and the manner of such disposal; and</text></clause>

<clause id="H12965F7087564A2DA2AD58CF75C7D2A1" commented="no"><enum>(vii)</enum><text display-inline="yes-display-inline">reasonable estimates ofâ€"</text>

<subclause id="H117817C4116B4924A3AFA3721616D0EE" commented="no"><enum>(I)</enum><text>the number of individuals who, as a result of the reported manufacture, processing, and distribution activitiesâ€"</text>

<item id="H6D6794B7C66145629A4303958E981D8B" commented="no"><enum>(aa)</enum><text>have been exposed to asbestos or mixtures or articles containing asbestos; and</text></item>

<item id="HBD11957150AB4256AA44F537940BE10C" commented="no"><enum>(bb)</enum><text>will be so exposed; and</text></item></subclause>

<subclause id="H69591D02B61F4C14B45999EFCD7D1697" commented="no"><enum>(II)</enum><text>the nature, duration, frequency, and levels of any such exposure.</text></subclause></clause></subparagraph>

<subparagraph id="HD3FC9C0FCA6F4078B6278DDE5564440C"><enum>(C)</enum><header>Reporting period</header><text>For purposes of subparagraph (B), the reporting period for a report submitted underâ€"</text>

<clause id="H2B6061DC08E1487DB5924FD6C2F1E46D"><enum>(i)</enum><text display-inline="yes-display-inline">subparagraph (A)(i) shall be the period that begins on the date that is 36 months prior to the date of enactment of this subsection and ends on the date of enactment of this subsection; </text> </clause>

<clause id="H5286A01606B542FB9F8D3518FEDA7A08"><enum>(ii)</enum><text display-inline="yes-display-inline">subparagraph (A)(ii) shall be the period that begins on the date of enactment of this subsection and ends on the date on which the prohibition under paragraph (1) takes effect; </text></clause>

<clause id="H194A4E63965249EDA7FE05EF64A62931"><enum>(iii)</enum><text>subparagraph (A)(iii)(I) shall be the period that begins on the date on which an exemption is granted under paragraph (2) and ends on the date such exemption expires (not including an extension thereof); and</text></clause>

<clause id="H2B4B0CF31773481A8EEF6DC84FAD786E"><enum>(iv)</enum><text>subparagraph (A)(iii)(II) shall be the period that begins on the date on which an exemption is extended under paragraph (2) and ends on the date such extension expires.</text></clause></subparagraph>

<subparagraph id="H72092FCEB17F459893D4A9AB01F9CADE"><enum>(D)</enum><header>Reporting forms and instructions</header><text>Not later than 30 days after the date of the enactment of this subsection, the Administrator shall publish a notice in the Federal Register that provides instructions for reporting under this paragraph and a form or forms for use by persons submitting reports under this paragraph.</text></subparagraph>

<subparagraph id="HE3824633A78149A59F61A1BE102DEEEF"><enum>(E)</enum><header>Availability</header><text display-inline="yes-display-inline">Not later than 3 months after a report is submitted under subparagraph (A), the Administrator shall make such report available to the public.</text></subparagraph>

<subparagraph id="H983A0C715E834B09ADC12C262F11D1F0"><enum>(F)</enum><header>Summary and analysis</header><text display-inline="yes-display-inline">Not later than 180 days after a report is submitted under subparagraph (A), the Administrator shall make available to the public a summary and analysis of the information such report contains.</text></subparagraph></paragraph>

<paragraph id="H6BD9BAF66E364966B667724EB9C74D6C"><enum>(4)</enum><header>Definitions</header><text>In this subsection:</text>

<subparagraph id="H914621BD8FE64C4BA27EFE45A7470066"><enum>(A)</enum><header>Asbestos</header><text display-inline="yes-display-inline">The term <term>asbestos</term> meansâ€"</text>

<clause id="HE6963303FA3042AF8B8F009ECDD225AD"><enum>(i)</enum><text>the asbestiform varieties of chrysotile, actinolite, amosite, anthophyllite, crocidolite, richterite, winchite, and tremolite; and</text></clause>

<clause id="HFE98C1829DE046D98A2C3D6767074653"><enum>(ii)</enum><text>the non-asbestiform varieties of richterite and winchite.</text></clause></subparagraph>

<subparagraph id="H37BCFC4D20BC4814AFDB3C725842FFA1"><enum>(B)</enum><header>Distribute in commerce</header><text>The terms <term>distribute in commerce</term> and <term>distribution in commerce</term> have the meaning given the terms in section 3(5), but, notwithstanding such section 3(5), do not include, with respect to asbestosâ€"</text>

<clause id="H2DC6915E09E343FEACFF705056191D43"><enum>(i)</enum><text display-inline="yes-display-inline">end-use of a mixture or article containing asbestos and installed in a building or other structure before the date of enactment of this subsection; or</text> </clause>

<clause id="H523A6CC179E44289B925751BAD74A4C1"><enum>(ii)</enum><text>distribution of a mixture or article containing asbestos solely for the purpose of disposal of the mixture or article in compliance with applicable Federal, State, and local requirements.</text></clause></subparagraph>

<subparagraph id="H2F540628F92240F6A90023117ED8165A"><enum>(C)</enum><header>Mixture or article containing asbestos</header><text>The term <term>mixture or article containing asbestos</term> includes a mixture or article in which asbestos is present as an impurity.</text></subparagraph></paragraph> </subsection><after-quoted-block>.</after-quoted-block></quoted-block></section>

<section id="H829254DF930242F1B163E92273138716"><enum>3.</enum><header>Legacy asbestos: report and recommendations</header>

<subsection id="H491A1A39DD634174AC8388CC388D226F"><enum>(a)</enum><header>Report</header><text>Not later than 18 months after the date of the enactment of this Act, the Administrator of the Environmental Protection Agency, in consultation with the Secretary of Health and Human Services and the Secretary of Labor, shall prepare and submit to Congress a report assessingâ€"</text>

<paragraph id="H912FFF01071E418394348AB4B36A906A"><enum>(1)</enum><text>the presence of asbestos in residential, commercial, industrial, public, and school buildings; and</text></paragraph>

<paragraph id="H9F936306C3EA4FE0A13C4153C5479568"><enum>(2)</enum><text>the extent of exposure and risk to human health associated with the asbestos present in such buildings from all commercial, industrial, and consumer activities that may result in asbestos exposure.</text></paragraph></subsection>

<subsection id="HBAD3CE8F8C2B414D8A48BCBF94E4C0BF"><enum>(b)</enum><header>Contents</header><text>The report required under subsection (a) shall be based upon the best available information, and information that can feasibly be obtained through surveys or other means, and shall provide the following:</text>

<paragraph id="HFE1E63BC29A048428C4F7477520ECE86"><enum>(1)</enum><text>An estimate of the number of residential, commercial, industrial, public, and school buildings where asbestos is present.</text></paragraph>

<paragraph id="H13F6B56A48974D55859F73BB556A5CDB"><enum>(2)</enum><text>An estimate of the amount of asbestos in such buildings and the portion of such asbestos that is friable.</text></paragraph>

<paragraph id="H50D5EE48D95E4771824D296712452D71"><enum>(3)</enum><text>A description of the types of building components and systems containing asbestos in such buildings and the categories of mixtures and articles containing asbestos that are present, such as thermal insulation, roofing materials, asbestos cement pipe, and asbestos cement sheet.</text></paragraph>

<paragraph id="H8FA13E703A284C2E82F63AD50468FA0D"><enum>(4)</enum><text>For each category of building, an estimate of the number of people potentially exposed to asbestos, the conditions and activities with the greatest potential for exposure, and estimates of the levels of exposure.</text></paragraph>

<paragraph id="H9F2B101E14A4425BAEDF86F0588BD6F5"><enum>(5)</enum><text>A description of the role of handling, maintenance, and construction practices in creating exposure to asbestos and the impact of building aging on the potential for asbestos exposure.</text></paragraph>

<paragraph id="H3ABC3AEBA96C4D05A635DDA39BDAD93E"><enum>(6)</enum><text>An estimate of the amount of asbestos waste generated from building renovation, repair, and demolition for each of the last 5 years and the procedures that are utilized for the handling, transport, and disposal of such waste.</text></paragraph></subsection>

<subsection id="H5AD600C573D04F07A546EDE46D909965"><enum>(c)</enum><header>Recommendations</header>

<paragraph id="HB65DD43E03DE409CA1A152A648029FC8"><enum>(1)</enum><header>In general</header><text>The report submitted under subsection (a) shall containâ€"</text>

<subparagraph id="H3C864549821B4D78B91A881E50535C46"><enum>(A)</enum><text display-inline="yes-display-inline">an assessment of the sufficiency of existing statutes, regulations, policies, and programs, implemented by the Environmental Protection Agency, the Department of Labor, and other agencies, in protecting against exposures to legacy asbestos; and</text></subparagraph>

<subparagraph id="H70B84048730A4B64B1E94DCA2CB4B5C2" commented="no"><enum>(B)</enum><text>recommendations for modifications or additions to such statutes, regulations, policies, and programs, as necessary to reduce or eliminate risks to human health.</text></subparagraph></paragraph>

<paragraph id="H181DAF9DEBFA43A7A15168641F6E8BDC"><enum>(2)</enum><header>Inclusions</header><text display-inline="yes-display-inline">Recommendations under paragraph (1)(B) may include recommendations for new, additional, or modified statutes, regulations, policies, or programs forâ€"</text>

<subparagraph id="HEDF45EB0F6034728B5EE69A2FDB2A5CA"><enum>(A)</enum><text>the inspection of buildings to determine the presence and condition of asbestos;</text></subparagraph>

<subparagraph id="H02BC3EE93A2D4230A9A130C9BE4066AD"><enum>(B)</enum><text>inventorying the presence and condition of asbestos in buildings;</text></subparagraph>

<subparagraph id="H255B4746AD994A6A9914D3CD598536C0"><enum>(C)</enum><text>removal of asbestos from buildings;</text></subparagraph>

<subparagraph id="H1C515C18C23E42A5ADCE5F51C2CF0690"><enum>(D)</enum><text>handling asbestos during building maintenance, repair, demolition, and other commercial and industrial activities with the potential for asbestos exposure; and</text></subparagraph>

<subparagraph id="H1BFF589FED4646368A3F36495A7F1048"><enum>(E)</enum><text>disposal of asbestos-containing waste and debris.</text></subparagraph></paragraph></subsection>

<subsection id="H6B939239A3104A8794E1273CE0A280EF"><enum>(d)</enum><header>Effect on existing law</header><text>Compliance with this section shall not relieve the Administrator of the Environmental Protection Agency, the Secretary of Health and Human Services, or the Secretary of Labor, of any other obligation arising under this Act or any other law.</text></subsection>

<subsection id="H93CD4BE5159544A8A79FB146573E6F6B"><enum>(e)</enum><header>Definition of asbestos</header><text display-inline="yes-display-inline">In this section, the term <term>asbestos</term> meansâ€"</text>

<paragraph id="HAE6D8D447D984383B74A52DD65D77963"><enum>(1)</enum><text>the asbestiform varieties of chrysotile, actinolite, amosite, anthophyllite, crocidolite, richterite, winchite, and tremolite; and</text></paragraph>

<paragraph id="H5CA0DD68FD26429C891DF04E72FA4BE5"><enum>(2)</enum><text>the non-asbestiform varieties of richterite and

winchite.</text></paragraph></subsection></section>
</legis-body>
</bill>

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 12/17/2018 4:39:13 AM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Tyree, JamesN [tyree.jamesn@epa.gov]
Subject: Latest fact sheets Re: CB_Lead Fact Sheet for Wheeler Confirmation.oppt2.docx
Attachments: Asbestos Fact Sheet for Wheeler Confirmation.12.16.18.docx; ESA and FIFRA 12.16.2018.docx; Fact Sheet - methylenechloride.oppt.docx; Fact Sheet - TSCA general.12.16.18.docx; Fact Sheet - TSCA Sec 6 Rules (Trichloroethylene Methylene Chloride N-Methylpyrrolidone).12.16.18.docx; Glyphosate. 12.16.2018.2.docx; Lead.12.16.18.docx; TSCA Animal Strategy Fact Sheet.12.16.18.docx; WPS. 12.16.2018.docx

Hi. I would like to move the attached clean versions of fact sheets to Sven first thing in the morning to start his review of the fact sheet. Okay? Regarding the attached lead fact sheet, I will ask Sven whether the congressional interest for lead was both dust and soil. Also for asbestos, I would like to send it to Sven acknowledging that I have an asked oppt whether there are any more recent asks from Congress (usually Sven would add those anyway). Please advise.

m

From: Beck, Nancy
Sent: Sunday, December 16, 2018 5:11 PM
To: Bertrand, Charlotte
Cc: Tyree, JamesN; Hanley, Mary; Baptist, Erik
Subject: Re: CB_Lead Fact Sheet for Wheeler Confirmation.oppt2.docx

I'm ok with removal but agree it would be good to check what the ask was.

****

Nancy B. Beck, Ph.D., DABT
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
P: 202-564-1273
beck.nancy@epa.gov

On Dec 16, 2018, at 4:40 PM, Bertrand, Charlotte <Bertrand.Charlotte@epa.gov> wrote:

> Yes. Interested to see if Nancy and Erik ok with that edit. We may want to firm up with Sven if Congressional interest was explicit on both dust and soil.
>
> ---
>
> **From:** Tyree, JamesN
> **Sent:** Friday, December 14, 2018 6:43 PM
> **To:** Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
> **Cc:** Hanley, Mary <Hanley.Mary@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>
> **Subject:** RE: CB_Lead Fact Sheet for Wheeler Confirmation.oppt2.docx
>
> Hi,

Do you mean:
Past Congressional interest was focused on concerns with implementation and costs for contractors associated with the 2008 RRP rule and interest in EPA moving forward with revising the hazard standards for lead ~~in dust and soil~~.

James

From: Bertrand, Charlotte
Sent: Friday, December 14, 2018 5:38 PM
To: Baptist, Erik <baptist.erik@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>
Cc: Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: CB_Lead Fact Sheet for Wheeler Confirmation.oppt2.docx

See comment box regarding 'soil'

ASBESTOS

BACKGROUND:

- Asbestos is a substance of concern being addressed at both the state and federal level. Existing federal (EPA, OSHA, CDC) requirements help ensure proper management and safe disposal of asbestos-containing building material.
- Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations specify work practices for asbestos during demolition and renovation of certain structures, installations, and buildings. These work practice standards are designed to minimize the release of asbestos fibers during building demolition or renovation, waste packaging, transportation and disposal.
- Asbestos Hazard Emergency Response Act (AHERA) (TSCA Title II) prevents or reduces asbestos hazards in school buildings.
- Generally, TSCA does not give EPA the authority to regulate the non-commercial use of items already within a home. EPA has extensive guidance for homeowners that gives them the tools and information they need to protect themselves and is available on EPA's webpage under asbestos.
- Additional state and local regulations extend beyond the federal requirements to address asbestos in buildings.

KEY POINTS:

- On December 19, 2016, EPA designated Asbestos as one of the first 10 chemical substances for which EPA is conducting a risk evaluation. Legacy uses, associated disposals, and legacy disposals will be excluded from the risk evaluation. These include asbestos containing materials that remain in older buildings or are part of older products but for which manufacture, processing and distribution in commerce are not currently intended, known or reasonably foreseen.
- EPA proposed a Significant New Use Rule (SNUR) for uses of asbestos that were occurring in 1989 but have subsequently phased out. EPA is proposing to ensure that manufacture, import, or processing for these currently unregulated new uses identified in the SNUR are prohibited unless reviewed and approved by EPA. EPA's proposed new review process empowers EPA to take action, including prohibiting the intended use.
- Senators Durbin, Feinstein, and Tester wrote in support of including asbestos on the initial list.

Commented [BE1]: Anything more recent?

TALKING POINTS:

- EPA is focusing its risk evaluation on asbestos currently manufactured, imported, processed or distributed in the United States, which falls within the agency's TSCA jurisdiction. Many existing Federal and State regulations protect against asbestos exposure from legacy uses.
- EPA's proposed Significant New Use Rule would immediately prohibit certain unregulated uses of asbestos and require a review from EPA which may result in restrictions, including continued prohibition. Without this SNUR, these uses can commence in the US at any time without review and regulation from EPA.

Message

From: Baptist, Erik [Baptist.Erik@epa.gov]
Sent: 12/15/2018 5:14:40 PM
To: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]
CC: Tyree, JamesN [tyree.jamesn@epa.gov]
Subject: RE: Asbestos Fact Sheet for Wheeler Confirmation.oppt2.docx
Attachments: Asbestos Fact Sheet for Wheeler Confirmation.oppt2.0.docx

Flag: Flag for follow up

Responses to CB's comments.

Erik Baptist
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, DC 20460
(202) 564-1689
baptist.erik@epa.gov

From: Bertrand, Charlotte
Sent: Friday, December 14, 2018 4:42 PM
To: Baptist, Erik <baptist.erik@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>
Cc: Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: Asbestos Fact Sheet for Wheeler Confirmation.oppt2.docx

Coming at you one at a time.
Erik – I made some comments on your comments/edits. :)
Call if you want to discuss

564-2453

Message

From: Keller, Kaitlin [keller.kaitlin@epa.gov]
Sent: 7/30/2018 5:54:01 PM
To: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]
CC: Hanley, Mary [Hanley.Mary@epa.gov]
Subject: Updated Fact Sheets
Attachments: OCSPP-1 Chlorpyrifos.7.30.2018.docx; OCSPP-2 Formaldehyde 7.30.2018.docx; OCSPP-5 TSCA Animal Testing 7.30.2018.docx; OCSPP-7 PRIA Reauth.7.30.2018.docx; OCSPP-8 Dicamba 7.30.2018.docx; OCSPP-11 Asbestos 07.30.18.sek.docx; OCSPP-13 Glyphosate.7.30.2018.docx

Clean versions of Charlotte's edits are attached. Will have print outs for 2pm.

Kaitlin Keller, Special Assistant
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-7098

TSCA RISK EVALUATION FOR ASBESTOS

BACKGROUND:

- On December 19, 2016, EPA designated Asbestos as one of the first 10 chemical substances for which EPA is conducting a risk evaluation as required by the Toxic Substances Control Act (TSCA) to determine whether the chemical substances present an unreasonable risk of injury to health or the environment.
- EPA's focus is on asbestos currently being manufactured, imported, processed or distributed in the US.

ISSUE:

- Legacy Uses: EPA has received criticisms regarding exclusion of 'legacy' uses during evaluation of existing chemicals. Asbestos is an example where this concern arises.
- Many legacy uses are asbestos materials found in homes, however, TSCA generally does not give EPA the authority to regulate the non-commercial use of items already within a home.
- Existing federal and state regulations address asbestos exposure from legacy uses in all buildings with more than four dwelling units. These regulations minimize release of asbestos fibers during building demolition or renovation, waste packaging, transportation and disposal.
- EPA's actions on asbestos will *prevent future legacy* issues with asbestos by promulgating a Significant New Use Rule (SNUR) to ensure that no new uses are initiated without EPA's review.

TALKING POINTS:

- EPA has not waited on completing the TSCA risk evaluation to take action on asbestos.
- In June of this year, EPA proposed an asbestos Significant New Use Rule. This is the first time EPA has proposed such an action for asbestos. If finalized, EPA will be positioned to prevent future legacy issues by ensuring that no new uses are initiated without review, empowering the EPA to take action, including prohibiting or limiting its intended use.
- For existing legacy issues, EPA believes TSCA is best suited to address uses for which a chemical is currently being manufactured, processed, or distributed. TSCA not provide authority to EPA to regulate non-commercial use of items already in homes.
- EPA will complete its risk evaluation of asbestos by December 2019 and, if unreasonable risk is identified, will propose appropriate risk management measures.

ED_005636_00000579-00001

Message

From: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
Sent: 12/14/2018 9:41:53 PM
To: Baptist, Erik [Baptist.Erik@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]
CC: Tyree, JamesN [tyree.jamesn@epa.gov]
Subject: Asbestos Fact Sheet for Wheeler Confirmation.oppt2.docx
Attachments: Asbestos Fact Sheet for Wheeler Confirmation.oppt2.docx

Coming at you one at a time.
Erik – I made some comments on your comments/edits. :)
Call if you want to discuss

564-2453

Frequently Asked Questions Regarding EPA's Proposed New Asbestos Rule

Will EPA's new regulation allow EPA to restrict new uses?

Yes.

EPA's new significant new use rule proposed on June 11, 2018 broadens EPA's restrictions on asbestos products. Now, EPA is further proposing to ensure that manufacture, import, or processing for the currently unregulated new uses identified in the SNUR are prohibited unless reviewed by EPA. EPA's proposed new review process empowers EPA to take action, including prohibiting or limiting its intended use.

Did the Obama Administration have the opportunity to propose to restrict new uses of asbestos and did they propose any action?

Yes, they had the opportunity to propose restrictions on new uses.
No, they did not propose any action

Is asbestos banned today?
No. Currently, asbestos is used for a handful of uses including water purification. The uses are identified in EPA's problem formulation for asbestos (found here: [HYPERLINK "https://www.epa.gov/sites/production/files/2018-06/documents/asbestos_problem_formulation_05-31-18.pdf"].) .

Does EPA allow the import of asbestos from Russia?

EPA cannot simply ban imports, regardless of their source, for current uses unless its ongoing evaluation under the Toxic Substances Control Act identifies unreasonable risk associated with such importation. The SNUR, when final, would prevent import, including from Russia and anywhere else, for the uses in the rule.

Asbestos Uses That Are Outright Banned

- Corrugated paper
- Rollboard
- Commercial paper
- Specialty paper
- Flooring felt
- New commercial uses that begin after August 25, 1989

Potential Market Uses Prevented by EPA's New Regulation[1]

- Asbestos arc chutes
- Asbestos pipeline wrap
- Asbestos separators in fuel cells and batteries
- Asbestos-reinforced plastics
- Beater-add gaskets
- Extruded sealant tape
- Filler for acetylene cylinders
- High-grade electrical paper
- Millboard
- Missile liner
- Roofing felt
- Vinyl-asbestos floor tile
- Adhesives and Sealants
- Roof and Non-Roof Coatings
- Other Building Products (other than cement products)

[1] These uses existed in 1989 and were not banned. The SNUR prevents market re-entry.

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 7/29/2018 4:07:27 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: Fwd: OCSPP EPW Hearing Prep Documents
Attachments: OCSPP-1 Chlorpyrifos.7.25.2018.sek.docx; ATT00001.htm; OCSPP-2 Formaldehyde.07.25.18.sek.docx; ATT00002.htm; OCSPP-3 TCE.MC.NMP.07.25.18.sek.docx; ATT00003.htm; OCSPP-4 TSCA Implementation.07.25.18.sek.docx; ATT00004.htm; OCSPP-5 TSCA Animal Testing.7.25.18.sek.docx; ATT00005.htm; OCSPP-6 WPS.07.25.2018.sek.docx; ATT00006.htm; OCSPP-7 PRIA Reauth.7.25.18.sek.docx; ATT00007.htm; OCSPP-8 Dicamba.7.25.2018.sek.docx; ATT00008.htm; OCSPP-9 New Chemical Reviews.07.25.18.sek.docx; ATT00009.htm; OCSPP-10 TSCA Existing Chemicals.07.25.18.sek.docx; ATT00010.htm; OCSPP-11 Asbestos.07.25.18.sek.docx; ATT00011.htm; OCSPP-12 Lead.07.25.18.sek.docx; ATT00012.htm; OCSPP-13 Glyphosate.7.25.2018.sek.docx; ATT00013.htm

I will print 3 sets to be ready for you at the office by 7 AM tomorrow (as well as the questions).

Sent from my iPhone

Begin forwarded message:

From: "Frye, Tony (Robert)" <frye.robert@epa.gov>
Date: July 29, 2018 at 11:59:30 AM EDT
To: "Beck, Nancy" <Beck.Nancy@epa.gov>, "Baptist, Erik" <Baptist.Erik@epa.gov>, "Hanley, Mary" <Hanley.Mary@epa.gov>
Cc: "Kaiser, Sven-Erik" <Kaiser.Sven-Erik@epa.gov>, "Palich, Christian" <palich.christian@epa.gov>
Subject: OCSPP EPW Hearing Prep Documents

Hello Team – Attached are the documents in Administrator Wheeler's hearing prep binder. I've also put your portion of the TOC below for reference. Have a great Sunday.

Best,
Tony

Office of Chemical Safety and Pollution Prevention (OCSPP)

Chlorpyrifos..... OCSPP-1
FormaldehydeOCSPP-2
Methylene ChlorideOCSPP-3
TSCA UpdateOCSPP-4
TSCA Animal Testing ProtectionsOCSPP-5
Worker Protection Standard (WPS) OCSPP-6
Pesticide Registration Improvement Act Authorization..... OCSPP-7
Dicamba..... OCSPP-8
New Chemical Reviews..... OCSPP-9
Existing Chemicals Reviews..... OCSPP-10
Asbestos..... OCSPP-11
Lead..... OCSPP-12

Glyphosate..... OCSPP-13

Tony Frye
Special Advisor
Office of Congressional & Intergovernmental Affairs
Environmental Protection Agency
Cell: 202.603.3225

Message

From: Strauss, Linda [Strauss.Linda@epa.gov]
Sent: 8/14/2018 6:06:14 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Dunton, Cheryl [Dunton.Cheryl@epa.gov]; Parsons, Doug [Parsons.Douglas@epa.gov]
Subject: FW: Correction to asbestos snopes article
Attachments: Snopes asbestos correction NPCD.DOCX

Flag: Flag for follow up

Here are OPPT's edits to Cheryl's edits on the SNOPES article…Can we say something simple and digestible like…
Few asbestos uses were banned but market forces and litigation resulted in many asbestos uses being removed from the market. What EPA is doing is providing a back-stop so these same uses (or new ones) can't come back on the market before EPA has had an opportunity to review and approve or limit/prohibit.

Mark has approved the attached. NPCD also suggests the following clarifying bullets.

- Any new uses of asbestos initiated for the first time after August 25, 1989 is banned as a result of the 1991 court decision. As a point of clarification, in this proposed rulemaking, a significant new use of asbestos addresses multiple uses that were initiated prior to August 25, 1989, for which manufacturing and processing are no longer ongoing in the United States.
- In the absence of this proposed rule, the importing or processing of asbestos (including as part of an article) for the significant new uses proposed in this rule may begin at any time, without prior notice to EPA. The proposed rule provides EPA the new ability to evaluate the risk of these uses before the can enter commerce.
- While the scope of the risk evaluation for asbestos includes the current ongoing uses of asbestos, the proposed SNUR serves to compliment the risk evaluation process by covering uses of asbestos that are no longer ongoing in the unlikely event that someone attempts to resume or reintroduce such uses. In accordance with the Toxic Substances Control Act (TSCA), EPA can only ban a chemical substance following an unreasonable risk determination after EPA concludes the risk evaluation for asbestos, which the Agency expects to publish in December 2019.

Message

From: Baptist, Erik [Baptist.Erik@epa.gov]
Sent: 12/12/2018 2:54:49 AM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Hanley, Mary [Hanley.Mary@epa.gov]; Tyree, JamesN [tyree.jamesn@epa.gov]
Subject: RE: Asbestos Petition RL for OCSPP IO Review
Attachments: Comments_Asbestos TSCA Section 21 Petition FR Document 12-11-2018 RL.2.docx

Edits/comments attached. Great work!

Erik Baptist
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, DC 20460
(202) 564-1689
baptist.erik@epa.gov

From: Beck, Nancy
Sent: Tuesday, December 11, 2018 6:28 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Hanley, Mary <Hanley.Mary@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: RE: Asbestos Petition RL for OCSPP IO Review

A few little nits added to Charlottes. I will read again more closely after the workgroup review.
Team has done an excellent job!

Nancy B. Beck, Ph.D., DABT
Deputy Assistant Administrator, OCSPP
P: 202-564-1273
beck.nancy@epa.gov

From: Bertrand, Charlotte
Sent: Tuesday, December 11, 2018 6:16 PM
To: Hanley, Mary <Hanley.Mary@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: RE: Asbestos Petition RL for OCSPP IO Review

Few small comments. Thanks.
Charlotte

From: Hanley, Mary
Sent: Tuesday, December 11, 2018 5:35 PM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: FW: Asbestos Petition RL for OCSPP IO Review
Importance: High

Attached for OCSPP IO review is a revised version of the asbestos CDR-related sec 21 petition response FRN redlined to show changes. The clean version has been provided to Peter for the workgroup review

---

From: Blunck, Christopher
Sent: Tuesday, December 11, 2018 3:50 PM
To: Hanley, Mary <Hanley.Mary@epa.gov>
Cc: Hartman, Mark <Hartman.Mark@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Blair, Susanna <Blair.Susanna@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>; Vendinello, Lynn <Vendinello.Lynn@epa.gov>
Subject: FW: Asbestos Petition RL for OCSPP IO Review
Importance: High

Mary -- Attached for OCSPP IO review is a revised version of the asbestos CDR-related sec 21 petition response FRN redlined to show changes after consideration of OCSPP IO comments. Per discussion this morning, a clean version of the attached has been sent to Peter Smith for transmittal to FAR (or a "FAR-like" process).

Please let us know if you have questions –

Thanks!

Chris Blunck
Special Assistant/Policy Advisor
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Phone: 202-564-8078
Fax: 202-564-0575

Please do not print this email unless absolutely necessary

WARNING - Do not e-mail any Confidential Business Information (CBI) to EPA

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 6/30/2018 3:23:40 PM
To: Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Layne, Arnold [Layne.Arnold@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Hoyt, Sarita [Hoyt.Sarita@epa.gov]; Smoot, Cameo [Smoot.Cameo@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Barone, Stan [Barone.Stan@epa.gov]; Knott, Steven [Knott.Steven@epa.gov]; Graves, Inza [Graves.Inza@epa.gov]; Morris, Jeff [Morris.Jeff@epa.gov]; Henry, Tala [Henry.Tala@epa.gov]; Hartman, Mark [Hartman.Mark@epa.gov]; Blunck, Christopher [Blunck.Chris@epa.gov]; Pierce, Alison [Pierce.Alison@epa.gov]; Lintner, Colby [Lintner.Colby@epa.gov]
CC: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Wise, Louise [Wise.Louise@epa.gov]; Hanley, Mary [Hanley.Mary@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Tyree, JamesN [tyree.jamesn@epa.gov]; Blair, Susanna [Blair.Susanna@epa.gov]; Schmit, Ryan [schmit.ryan@epa.gov]; Scheifele, Hans [Scheifele.Hans@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Sisco, Debby [Sisco.Debby@epa.gov]; Shimkin, Martha [Shimkin.Martha@epa.gov]; OCSPP DAA-RCS [OCSPP_DAA-RCS@epa.gov]
Subject: CORRECTION AND APOLOGIES - -DUE COB 7/2/18 - Annual Regulatory PLAN - List of Actions
Attachments: Fall 2018 Reg Plan Agenda Data Call ; Reg Plan_FY2019_List of Candidate Actions.xlsx

Hi Everyone,

The cat's out of the bag now! Although I meant for this to get through to Angela for distribution through her and fumbled through the send, the ask is still pressing and requires attention.

Best,
Peter

Hi Everyone!

OP has issued its data call for our annual Regulatory PLAN and the Fall update for the Regulatory AGENDA (attached). OP's instructions are attached, but note that the deadlines presented therein are due dates for AA-approved submissions to OP. In order to ensure we have the senior level sign-off required, we need to complete the identified activities ahead of the OP deadlines. I will send out another email that addresses (1) updates to Plan and Agenda entries (abstracts, effects information, schedule), (2) Reg Plan narratives, (3) EO 12866 significance determinations, (4) EO 13771 regulatory cost accounting. This one addresses *only* the list of OCSPP actions to include with EPA's Regulatory PLAN.

Fall 2018 Reg Plan Agenda Data Call

FY2018 Regulatory Plan List – All program office Reg Agenda submissions are due to RCS by COB TODAY!

Criteria for Regulatory Plan Inclusion

- The NPRM or Final Rule reflects the Administrator's priorities, particularly with respect to regulatory reform
- Publication of the NPRM or Final Rule in the Federal Register is expected to occur between October 1, 2018 and September 30, 2019.
- The NPRM or Final Rule is (or will be) identified as a "significant regulatory action" under Executive Order 12866

- Contain narrative additional information about need, legal basis, alternatives, anticipated costs & benefits, and risks (see next deadline)

To help get you started, I've attached a data pull from ADP Tracker that presents actions that potentially meet the identified criteria for inclusion. A few notes about the data pull:

1. The projected publication date in ADP Tracker falls within the specified period.
2. Actions on this list are either confirmed to be significant under EO 12866 or still require an OMB decision about significance, so the list includes some items that OMB has not yet weighed in on but that *we* think should be non-significant).
3. The list is only as accurate as ADP Tracker data is current. For example, the final rule milestones for the Dust-Lead Hazard Standards are all in "long-term" status and will need to be updated for OP to agree that the action should be included in the FY2019 Reg Plan.

Reg Plan_FY2019_Li...

As a reminder, Regulatory Plan action entries include more information than Regulatory Agenda entries, and we need to be prepared to PROMPTLY provide that information (i.e., approved by DAAs and submitted to OP by 7/13). I will provide more details in my next message.

Let me know if you have any questions. Thanks!

- Angela

Angela Hofmann
Director of Regulatory Coordination for the Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency (EPA)
Mailcode 7101M - 1200 Pennsylvania Ave., N.W., Washington, DC 20460
NEW Office Location effective 6/15/16: William Jefferson Clinton Building, East Room 3139L
Deliveries to RCS go to Room 3159
Phone: 202-564-0258; Email: hofmann.angela@epa.gov
http://www.epa.gov/ocspp

Message

From: Muellerleile, Caryn [Muellerleile.Caryn@epa.gov]
Sent: 6/21/2018 1:57:34 PM
To: RSC Core [RSC_Core@epa.gov]; RSC Regions Core [RSC_Regions_Core@epa.gov]
CC: Lamson, Amy [Lamson.Amy@epa.gov]; Griffiths, Charles [Griffiths.Charles@epa.gov]; Morgan, Cynthia [Morgan.Cynthia@epa.gov]; Boyle, Kathryn [Boyle.Kathryn@epa.gov]; Adams, Darryl [Adams.Darryl@epa.gov]; Simons, Andrew [Simons.Andrew@epa.gov]; Miles-McLean, Stuart [Miles-Mclean.Stuart@epa.gov]
Subject: Fall 2018 Reg Plan Agenda Data Call
Attachments: EPA_Spring_2018_publishedv2.xlsx

Importance: High

Greetings RSC,

OMB has sent agencies the call letter for the fall 2018 regulatory plan and agenda, and EO 13771 cost allowance submission (FY19) + 13771 cost accounting submission (FY18). Please note the following deadlines and read the instructions and information carefully.

1. **Immediate**: Use Lotus Notes > **ADP TRACKER** > Reg Reporting > Agenda Entries to see the entries queued up for your office/AAship at this time. If there are any erroneous omissions or additions, please contact Caryn Muellerleile or Darryl Adams.

2. **June 29, 2018:** Add to July 2018 tiering any new actions your AAship or region is considering proposing in the next 6-10 months, if they are items to be signed by the EPA Administrator and modifying the CFR. This also applies to new direct final or good cause final rules. Submit all of these actions for tiering by the end of the month.

3. **July 3, 2018:** Submit your AAships' **Reg Plan** entries (title & tracking number ONLY) to Caryn Muellerleile. Reg Plan entries must:
   - Reflect the Administrator's priorities, particularly with respect to regulatory reform
   - Be actions with an anticipated proposal or final stage in the Federal Register during FY19
   - Be "significant" under the terms of EO 12866
   - Contain narrative additional information about need, legal basis, alternatives, anticipated costs & benefits, and risks (see next deadline)

4. **July 13, 2018: All Regulatory Plan entries and Agenda entries in ADP TRACKER must be revised, reviewed by legal and policy analysts, and approved through each AAships' senior management.**

5. **July 13, 2018:** OMB significance determinations. OP will provide to the offices/AAships a list of anticipated FY19 final actions for signature, that will include the action's confirmed /absence of OMB determination, and spring 2018 EO 13771 designation. Please provide to OP a list of particular actions your AAship acknowledges as "significant" to allow OP to process the determinations with OMB. For those actions that your AAship will request a non-significance determination, please update the milestone with an appropriate date.

6. **July 13, 2018:** AAships with Reg. Plan entries (number 3 above) should submit their media-related Reg Plan narratives. EPA's 2017 Statement of Priorities is available at: https://www.reginfo.gov/public/jsp/eAgenda/StaticContent/201710/Statement_2000.html.

7. **July 13, 2018:** Anticipated FY19 final actions that are regulatory or deregulatory under the terms of EO 13771 must have cost or cost saving estimates to OP. These are best-guess estimates your office has for any action with a final rulemaking stage that triggers EO 13771 as regulatory or deregulatory. The information needed includes:

- Annualized costs or cost savings and/or the present value of those costs or cost savings using a 7% discount rate.

- Currency year of the analysis (i.e. the dollar value year)
- Length of time of the analysis over which these estimates are calculated

  Week of June 25: OP will arrange a separate meeting if any programs would like assistance on cost allowance estimates.

8. **October 1, 2018:** Accounting data for finalized regulatory and deregulatory actions for FY18 should be with OP at the time each final action is signed. Please continue to submit this action to OP on a continuous basis. Specifics on the format for providing the data is forthcoming.

The attached Excel spreadsheet from spring 2018 is only a reference to assist you with review of fall 2018 entries. Be please mindful of the following areas:

- Consider whether actions listed as "inactive" (or "pending" in ADP TRACKER) can be withdrawn.
- Any action listed as "Long-Term" will have a projected next stage of 10/01/2019 or later.
- Abstracts for any actions that are withdrawn should be revised to reflect the agency's decision to discontinue the action.
- Abstracts of completed actions should reflect completion rather than projection.
- There should not be any "Undetermined" responses for completed actions.
- Actions that have a priority category "Economically significant" are almost always "Major" under CRA.
- Actions that trigger UMRA > government typically also trigger federalism and some "government levels affected."
- Spell out all acronyms other than "EPA," and use plain language in writing your abstracts.

Please work with your legal and policy workgroup representatives to carefully review and revise the abstract, timetable, and other data fields of all reg. agenda and plan entries. All entries for your office/AAship must be approved through the AA level by **July 13, 2018**.

***

- For questions about the Regulatory Plan, contact Caryn Muellerleile (202) 564-2855.

- For questions about the Regulatory Agenda, contact Darryl Adams (202) 564-6569 or Kathryn Boyle (202) 564-8194.

- For questions about cost allowances and cost savings, contact Caryn, Charles Griffiths (202) 566-0156, or Cynthia Morgan (202) 566-2296.

Caryn Muellerleile
Regulatory Management Division
Office of Policy
US Environmental Protection Agency
1200 Pennsylvania Ave NW (1803A)
Washington, DC 20460
(202) 564-2855
muellerleile.caryn@epa.gov

Message

From: Carroll, Carly [Carroll.Carly@epa.gov]
Sent: 6/1/2018 4:58:41 PM
Subject: Weekly Report 06.01.18
Attachments: Weekly Report 06.01.2018.docx; Weekly Report 06.01.2018.pdf

Good afternoon,
Please find the weekly report for the week ending 06.01.18 attached.

Have a wonderful weekend.

Best,

Carly Carroll
Special Assistant to the Deputy Administrator
U.S. Environmental Protection Agency
(202) 564-2769
carroll.carly@epa.gov

Region 1

Hot Topics:

Parties Reach Significant Agreement in Principle on Priority Superfund Site
EPA, the State of Rhode Island, and Black & Decker have reached a mediated agreement in principle on the Consent Decree (CD) and Statement of Work (SOW) at the Centredale Manor Site in North Providence, RI. EPA will likely sign in early June. The CD will be lodged with the Court in mid-June. Under the terms of the CD, the PRPs will begin performance on the RD upon lodging. This Site is on Administrator Pruitt's list of sites targeted for immediate, intense action.

NH MS4 Permit Mediation Kicks-off
This week, mediation began among the appellants of the NH MS4 general permit for small municipalities. While the state of New Hampshire is not a party to the litigation, Region 1 secured the agreement of all parties to the state's participation in the mediation. Mediation for the Massachusetts MS4 general permit, which started last week, continues.

Lead Paint Removal Contractors Receive Notice of Upcoming Lead Inspections
Region 1 began outreach to contractors located in our two focus communities of Portsmouth, NH and Portland, ME. An initial mass mailing of 171 letters, including 23 to those whose lead removal firm certification has expired were sent to Portsmouth contractors. The letters provided information on EPA's initiative, lead-based paint rules, lead in drinking water, and on how to identify EPA accredited trainers in their area. A similar mass mailing to Portland contractors is expected to go out next week. Region 1 is coordinating these efforts with local and state officials as well as community groups.

Upcoming Major Decisions and Events:

Charles River (Massachusetts) Receives an A- in Annual Water Quality Report Card Announcement
On June 1, Region 1 will announce its 23rd annual grade for water quality in the Charles River. The grade of A- reflects 2017 data showing that the river met boating standards 95% of the time and swimming standards 72% of the time. This is only the second time that the Charles has achieved a grade this high.

RA Dunn, Erin Chancellor and Steven Cook to meet with concerned citizens at Coakley Superfund Site
On June 4, RA Dunn, Adviser Erin Chancellor and Deputy AA Steven Cook will visit the site and meet with Community Activist Jillian Lane and concerned neighborhood citizens. This visit is a follow-up to Albert Kelly's commitment to Jillian Lane that he would visit the site.

RA Dunn and Erin Chancellor to participate in two New Bedford Harbor events with Mayor Mitchell
On June 5, RA Dunn and Adviser Erin Chancellor will participate in an onsite celebration of the completion of the Pierce Mill Cove cleanup and the reopening of Riverside Park. Following the celebration, they will participate in a roundtable with Mayor Mitchell on his plans for economic growth and development of the New Bedford Harbor. MassDEP and USACE will also be in attendance.

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Region 2

Hot Topics:

Consent Order with National Grid at Gowanus Canal Superfund Site
On 5/24 Region 2 finalized this consent order, which provides for extensive cleanup work with an estimated value of about $100 million. Under the order National Grid will construct a sealed barrier wall to contain coal tar migration from its former Fulton Manufactured Gas Plant site; remove coal tar at two properties following their acquisition by New York City for construction by the City of an 8-million gallon CSO retention tank (required under the 2013 Record of Decision for the site); remove coal tar from beneath an adjacent City-owned public park and swimming pool; and develop plans for and provide a temporary and permanent replacement swimming pool facility. The order provides for close coordination of work by National Grid with work required by EPA's 2016 consent order with New York City addressing the property acquisition, design of the CSO retention tank, and related matters. Finally, the Order provides for the reimbursement of EPA's oversight costs.

"General Duty Clause" Compliance Order Issued to Shamrock Enterprises
On 5/29 Region 2 issued an order regarding Shamrock's failure to comply with §112(r) of the Clean Air Act, known as the "general duty clause," at its Franklinville, NJ facility. At the facility, which is near residences, Shamrock sells, stores, and handles compressed gases including acetylene and propane, which are extremely hazardous substances. Shamrock failed to identify potential hazards from accidental releases, and to design and maintain a safe facility so as to prevent releases. EPA inspected the facility at the request of New Jersey; state and local agencies participated in the inspection. The Order calls for proper handling and storage of extremely hazardous substances, and compliance with applicable industry standards and safety regulations, including fire code requirements.

Chemours Chambers Works/Deepwater, NJ
Chemours responded to EPA's questions regarding GenX, and we have begun our review of the document. Within the next one to two weeks we expect to start receiving results of Chemours' sampling for GenX in nearby monitoring and residential wells starting as early as next week. NJDEP has received an Order to Show Cause initiated by the Township of Carney's Point, which is near the Deepwater facility. The Town seeks NJDEP approval of a public participation plan for the Township. Chemours has agreed to develop a public website similar to the one that was set-up for Chemours' Fayetteville, NC site; development of the website should take about a month.

Wolff-Alport Superfund Site, Brooklyn, NY
RA Pete Lopez and staff met on 5/30 with Congresswoman Nydia Velasquez to brief her on progress at this site. At her request, Region 2 will organize a public availability session to update the community about the work at the site, probably on June 18.

Upcoming Major Decisions and Events:

Confidential: Settlement with NYC Housing Authority (NYCHA)
As of this writing, the announcement of the settlement with NYCHA is expected to occur on June 5th at noon at the U.S. Attorney's Office in Manhattan. We expect that Susan Bodine will attend.

June 6: RA Pete Lopez will give keynote remarks at Columbia Law School's "Key Environmental Issues in EPA Region 2," a biennial conference co-sponsored by the American Bar Association. The conference will also feature a panel discussion among the RA and the environmental commissioners of NY, NJ, PR and the USVI.

June 7: Deputy Administrator Wheeler will be visiting Region 2, with a planned tour of Gowanus Canal.

June 18: Region 2 leadership will be participating in a Lake Guardian event in Rochester, NY to highlight the survey of Lake Ontario (dive and sampling missions by EPA staff).

Region 3

Hot Topics:

Lead-Based Paint Program Continues Outreach Efforts in Philadelphia
LCD managers and staff met with the City of Philadelphia Department of Public Health's Director of Environmental Health Services and the Program Administrator of the Lead and Healthy Homes Program to continue discussing potential partnership opportunities. The City expressed interest in working together on outreach campaigns, especially to child care centers in Philadelphia. LCD learned more about the City's laws and programs related to lead-based paint in child care centers, as well as communication channels, outreach initiatives, training sessions, and inter-agency meetings, which may provide opportunities for collaboration. LCD will speak with the City again in June to follow up on this conversation.

Administrative Settlement Executed on [HYPERLINK "https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0300034"]**, New Castle, Delaware**
An Administrative Settlement Agreement and Order on Consent (AOC) for remedial design (RD) was executed on May 22, 2018, which is 31 work days after EPA waived special notice procedures and invited the Delaware Sand & Gravel Landfill (DS&G) Remedial Trust to negotiate the agreement. Respondents to the AOC will complete pre-design investigations and the RD and install two groundwater interceptor wells to begin implementation of EPA's December 2017 Amendment No. 2 to the 1988 Record of Decision. EPA also issued letters to the potentially responsible parties at the adjacent Army Creek Landfill Superfund site to encourage their continued negotiation of an allocation agreement with the DS&G Remedial Trust for performance of the remedial action under a future consent decree.

EPA Region III Reissues DC MS4 Permit
On Wednesday, May 23, 2018, EPA reissued the Municipal Separate Storm Sewer System NPDES permit for the District of Columbia (DC MS4).
The DC MS4 permit had been administratively extended since it expired in October 2016. EPA worked closely with the District of Columbia in drafting this permit and considered numerous public comments from a variety of stakeholders. The DC MS4 permit will take effect June 22, 2018.

EPA Certified Lead Renovator Company Pleads Guilty for Failing to Follow Safe Work Practices to Reduce a Lead Hazard Exposure Under Toxic Substances Control Act (Criminal Case No. 1:18-Cr-00157 Middle District of Pennsylvania)
On May 22, 2018, Bitner Brothers Construction Company, Inc. (Bitner Brothers) of Carlisle, Pennsylvania entered a two-count plea for violating safe work practices promulgated under the Toxic Substances Control Act (TSCA), and aiding and abetting. In February 2017, Bitner Brothers conducted the work inside two apartments In Harrisburg, Pennsylvania while families with small children were present. The company failed to comply with the regulation requiring that power grinding must have a shroud or containment system equipped with a HEPA vacuum during the renovation pursuant to Title 15, United States Code, Sections 2689 and 2615(b).

As part of the plea agreement, the defendant, and its President and owner, Charles H. Bitner, Jr., were directed not to undertake new work contracts that require a special skill, training or certification related to the handling and/or management of lead, including lead-based paints, for the period of probation. Magistrate Judge Martin Carlson accepted the plea and set a sentencing date for September 18, 2018. The maximum penalty for that offense is a fine of $200,000, a maximum period of probation of five years, as well as the costs of prosecution or probation, and a special court assessment.

Upcoming Major Decisions and Events:

None.

Region 4

Hot Topics:

Daicel Safety Systems (Beaver Dam, KY)
Key Message: During the week of May 29, 2018, Region 4 Administrator Trey Glenn informed the Commissioner for the Kentucky Department for Environmental Protection that EPA will defer to the state regarding the permit for Daicel Safety Systems.

Subtropical Storm Alberto
Key Message: Region 4, in coordination with Florida, Alabama, and Mississippi, conducted an assessment to identify any impacts from the storm to wastewater treatment facilities, Risk Management Plan facilities, or Superfund sites. No issues were identified.

Kentucky 2016 303(d) List Approval
Key Message: Region 4 has determined that Kentucky's 2016 303(d) List update substantially meets the intent of section 303(d) of the CWA and the EPA's implementing regulations. The Region is approving all the changes identified by the Commonwealth of Kentucky. Specifically, Region 4 approves Kentucky's decision to include approximately 350 additional pollutant-waterbody combinations on the section 303(d) list, and concurs with the delisting of 68 pollutant-waterbody combinations, Region 4 does not anticipate objections from stakeholders or the public nor anticipates media interest.

Upcoming Major Decisions and Events:

Decisions
Grenada – The Region's position based on the information and proposed remedy submitted by the PRP.

Events
Regions 4, 6 and Gulf of Mexico Program Office Meeting
On June 4, 2018, Region 4 Administrator Trey Glenn, Region 6 Administrator Anne Idsal, and other regional senior leadership will meet to discuss future engagement and support from the Gulf of Mexico Program Office and tour ongoing projects with partner agencies. New Orleans, LA. Closed Press.

Hurricane Preparedness Meeting
On June 5, 2018, Region 4 Administrator Trey Glenn will participate in a hurricane preparedness meeting with other senior leaders from Region 4, Region 6, and various headquarters offices. New Orleans, LA. Closed Press.

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Region 5

Hot Topics:

EPA Reaches Agreement in Principle with Crown Enterprises Inc. Regarding the McLouth Steel Property
Key Message: Crown Enterprises and its affiliate, MSC Land Company LLC, are expected to acquire the property, which is currently held by the Wayne County Land Bank.

The agreement will provide the companies with legal protections in exchange for cleanup work at the property. EPA, Michigan Department of Environmental Quality, U.S. Department of Justice, Crown and MSC devoted considerable time to this agreement, and EPA believes it will benefit the public by allowing for the reuse of contaminated land. EPA expects that the agreement can be finalized within the next 120 days.

EPA Responds to Office of Inspector General's Flint Report
Key Message: On May 30, 2018, Region 5, in coordination with OECA and OW, issued a formal response to the OIG's Flint report, including concurrence with all nine of the OIG's recommendations. The response also included corrections to a series of identified factual inaccuracies that were contained in the OIG's report.

The agency is working expeditiously to implement the recommendations made by the OIG.

EPA and MDEQ Coordinating on Draft Back Forty Mine Permit
Key Message: Once MDEQ shares a revised draft, the Region will send a letter to MDEQ indicating that the current draft satisfies EPA's objections if issued by June 6.

The Region agrees that the proposed conditions would satisfy EPA objections to the State's draft CWA 404 permit, and has provided suggestions to clarify the permit language. MDEQ will revise the draft to include clarifying language and will share with EPA this week.

Upcoming Major Decisions and Events:

Region 5 to Brief Administrator Pruitt on USS Lead on June 6, 2018
Key Message: The Region will be briefing Administrator Pruitt on the draft USS Lead Zone 1 Proposed Plan Record of Decision Amendment.

The USS Lead site is on the Administrator's Emphasis List and the completion of the Zone 1 Record of Decision Amendment is the completion milestone referenced for this site. Given the sensitivity of the issues within the community and the potential for the Amendment to be greater than $50 million, a briefing for the Administrator is required and is being coordinated with HQ.

EPA to Hold a Series of Public Engagement Meetings for the Great Lakes Restoration Initiative Action Plan III
Key Message: Meetings will be held in Toledo, Ohio; Rochester, N.Y.; Duluth, Minn.; Milwaukee, Wis.; Saginaw, Mich.; and Chicago, Ill., between June 13 and August 7, 2018.

EPA and its federal partners are in the process of developing GLRI Action Plan III, which outlines Great Lakes restoration focus areas and goals for the years 2020-2024. The proposed plan will be available for formal public comment this fall.

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Region 6

Hot Topics:

HP Cylinders Emergency Response, Baytown, Texas
The company was called Stillwater Consultants, LLC, and it abandoned over 500 cylinders of compressed gas. EPA expects the contractor bids to begin to come in this week. Texas Commission on Environmental Quality (TCEQ) continues to provide 24-hour site security and conduct daily fence line air monitoring. All fence line readings have been non-detect to date. The site remains secured and conditions are stable, but being monitored closely. EPA's Emergency Response contractors are on standby in Houston and ready to respond in the event the situation changes.

US/Mexico Border Wall, McAllen, Texas
Under the recent appropriations bill the Secretary of Homeland Security is required to consult with the Secretary of Interior and the Administrator of the U.S. Environmental Protection Agency as they plan to replace existing and build the new wall and fence along the border. While the Secretary of Homeland Security issued waivers on many border wall/fence projects in 2017, DHS would like to address environmental health concerns upfront in the design and planning phase where possible. EPA joined federal officials to tour the Border Wall along the Lower Rio Grande near McAllen, Texas this week.

Carbon Black CAA Judicial Settlements, Oklahoma, Louisiana, Texas
On May 25, 2018, DOJ and EPA filed a motion to enter judicial settlements for the following consent decrees (CDs), all part of EPA's National Carbon Black Initiative: Cabot Corporation (2nd amendment to existing CD), Orion (CD), Columbian Chemicals (CD), and Sid Richardson (CD). In addition, Continental Carbon (amendment to existing CD), a motion to enter was filed and granted.

Sandow Power Plant, Rockdale, Texas
EPA anticipates that as early as June 4, 2018, the U.S. Department of Justice (DOJ) may notify Sandow Power Company LLC (SPC), an affiliate of Luminant Generation Company LLC, that the United States will join in a motion to the Court to terminate the Consent Decree (CD) relating to SPC's coal-fired power plant in Rockdale, Milam County, Texas. On January 11, 2018, SPC permanently retired Sandow Units 4 and 5, the subjects of the CD. On February 7, 2018, SPC sent a letter to DOJ and EPA requesting that the United States join in a motion to the Court to terminate the CD.

Anchor Glass Container Corporation, Henryetta, Oklahoma
The Department of Justice (DOJ) and EPA are expected to sign a Consent Decree (CD) with Anchor Glass Container Corporation (Anchor). The settlement includes glass facilities in Regions 2, 4, 5, and 6; two states, Indiana and Oklahoma, also participated in the negotiations and plan to sign the CD. The Anchor facility in Region 6 is located in Henryetta, Oklahoma, and the settlement resolves Clean Air Act violations for commencing construction without obtaining permits to comply with the Act's Prevention of Significant Deterioration requirements. Anchor will install air pollution control equipment and pay a $1.1-million-dollar penalty, with $650,000 going to the United States, and $325,000 going to each of Indiana and Oklahoma.

New Mexico NESHAP/NSPS Delegation
EPA withdrew its direct final approval of the updated of NESHAP and NSPS provisions to New Mexico Environment Department. EPA received adverse comments regarding NMED's ability and available resources to implement and enforce the NESHAP and NSPS standards.

Upcoming Major Decisions and Events:

St. James Parish South Louisiana Methanol LP, Louisiana

Region 6 intends to issue a federal register notice announcing the Administrator's decision on the South Louisiana Methanol Title V Petition. The date, while intended for June 15, is subject to change based on internal deliberations on the merits of the petition.

Arkansas State Implementation Plan
Region 6 intends to take final SIP action by June 20 to raise ADEQ's minor NSR permitting and de minimis thresholds. EPA received significant public comments on the proposed SIP changes from Sierra Club and more specifically on our 110(l) analysis (anti-backsliding into nonattainment) for the action. EPA has developed a response to those comments in the final action. This will address two backlog SIP actions.

June 4	RESTORE Project Tour, New Orleans, Louisiana
June 5	Hurricane Preparedness Meeting, New Orleans, Louisiana

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Region 7

Hot Topics:

Sporlan Valve Site Meeting Hosted by Missouri Department of Natural Resources (MDNR)
Key Message: Region 7 attended a state organized stakeholder meeting on the potential NPL listing of the Sporlan Valve site in advance of a public availability session next week.

- On May 30, MDNR and EPA Region 7 met with Washington, MO City officials, Franklin County Commissioners, the Franklin County Health Department, and State Representatives to discuss local support for adding the Sporlan Valve site to the Superfund National Priorities List (NPL). TCE has been detected in groundwater, soil gas, and indoor air of residential homes adjacent to the site and a series of actions have been taken by EPA to mitigate the threat of vapor intrusion including sampling for TCE vapors in homes and installing vapor mitigation systems. To date, EPA has installed and/or overseen the installation of 19 vapor mitigation systems at homes adjacent to the site.
- On June 5, EPA will host a Public Availability session in Washington, MO to discuss the proposal of the site to the NPL. MDNR and the Governor of Missouri want local support for proposed listing prior to EPA moving forward.

Upcoming Major Decisions and Events:

Hurricane Preparedness Meeting
Key Message: On June 5, Regional Administrator Jim Gulliford will travel to New Orleans, LA to attend the Hurricane Preparedness Meeting.

- The purpose of the meeting is to consider and address lessons learned during prior natural disasters, most notably from the 2018 hurricane and wildfire seasons, to improve EPA's natural disaster preparedness, response, and recovery efforts.
- Several EPA regions and offices have been invited to participate.

OECA Assistant Administrator Visit
Key Message: On June 6, OECA Assistant Administrator Susan Bodine will visit Region 7. Agenda sessions include opportunities for AA Bodine to meet with Superfund and Criminal Investigation Division staff, participate in an All Hands meeting for Region 7 staff, and discuss enforcement direction.

Assistant Deputy Administrator and Chief of Operations Visit
Key Message: On June 7, Assistant Deputy Administrator and Chief of Operations Henry Darwin will be at Region 7 to assess progress and provide coaching on visual management tools created during Region 7's ELMS training in late April.

Region 8

Hot Topics:

Notice of Intent to Delete the Davenport and Flagstaff Superfund Site published in FR
On June 4, EPA and the Utah Department of Environmental Quality will invite the public to comment on the proposal to delete the remaining portions (OU2, OU3 and the remaining portions of OU1) of the Davenport and Flagstaff Smelters Superfund Site from the National Priorities List.

Upcoming Major Decisions and Events:

Site Visit to Basin Electric Laramie River Station
On June 6th, R8 staff will join the Wyoming Department of Environmental Quality at the Basin Electric Laramie River Station to learn more about NO_x emission controls being installed in accordance with a settlement agreement entered into by the EPA, the state of Wyoming and Basin Electric. In accordance with the settlement agreement, the EPA must propose by October 5, 2018, a revised Federal Implementation Plan for the Laramie River Station reflecting, among other things, the agreed upon NO_x controls.

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Region 9

Hot Topics:

Hawaii Volcano Response
RA Mike Stoker met with Hawaii Governor Ige and key State leaders. We shall brief Dep. Administrator Wheeler Friday regarding our air monitoring and public communication. We plan to launch a publicly accessible website with real-time air-monitoring data (SO2, H2S, and particulates) from our 12 stations. With FEMA and HHS, we'll increase risk communication and community engagement where the County has been reticent. The State is requesting of FEMA increased federal support under ESF 8 and ESF 10 (e.g. 10 additional air monitoring stations). We're in close contact with the National Guard and Civil Support Team to address electrical power, cell phone coverage, and access to our air monitoring network.

National Oil Enforcement
We're hosting an EPA-only national oil enforcement meeting in the Regional Office, with participation from the Regions, OLEM and OECA.

Upcoming Major Decisions and Events:

Nevada
On June 5-6, RA Mike Stoker will host the Nevada Dept. of Environmental Quality executive team for two days of program meetings in San Francisco.

Arizona
June 6-7, RA Mike Stoker with participate in the Sen. McCain-hosted Rio Salado tour and meetings with Federal and State agencies, to focus on improving the environmental and economic vitality of the Salt River riparian corridor. On June 7, he'll meet with Arizona DEQ Director Misael Cabrera and present the newly awarded Performance Partnership Grant.

So. California
June 8-9, RA Mike Stoker will meet with the EPA San Diego Border Office staff and be briefed on our Mexican Border program. He will address the California Independent Petroleum Association annual conference.

American College of Environmental Lawyers
Alexis Strauss will speak June 1 at the San Francisco regional meeting of this group, which convenes in each Region and has in recent months hosted speaking engagements with Ken Wagner and Cathy Stepp.

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Region 10

Hot Topics:

Region 10 Assists Salem, OR With Harmful Algal Bloom Event and Do-Not-Drink Advisory
A harmful algal bloom has produced high concentrations of microcystins in Detroit Lake, which serves as the primary drinking water source for the City of Salem, Oregon. A recreational water advisory was issued for the lake on May 23rd, when concentrations of microcystins were measured at more than 10 times the Oregon Health Authority advisory level. Out of an abundance of caution on May 29, the City issued a do-not-drink advisory for individuals with compromised immune systems and small children. An advisory update will be issued after additional sample results come in on May 31st. EPA's role is to provide technical assistance to the state and City of Salem and answer questions related to HABs effects and treatment options. Over the past several years, Region 10 has worked to build capacity among states, tribes and local governments to identify HABs problems, the role of nutrients, and response actions, including hosting workshops and webinar-based meetings. Region 10 is following the draft HABs Response Plan template to manage our coordinated response to this incident with HQ, state, and local officials.

Upcoming Major Decisions and Events:

Region 10 Approves Idaho's NPDES Program
On June 5th, Region 10 and EPA headquarters will participate in a signing ceremony in Boise, Idaho announcing EPA's approval of the Idaho Department of Environmental Quality's wastewater discharge permit program (IPDES). Starting July 1, 2018, IDEQ will begin issuing and enforcing water pollution permits for industry and municipalities across the state. IDEQ has been working for several years to build a program that will ensure dischargers meet the state's water quality standards and protect water quality. The program will be phased in over four years and Region 10 will continue to provide technical assistance.

Region 10 Participates in Regional Tribal Operations Committee Quarterly Meeting in Juneau, AK
The Region 10 Tribal Operations Committee will meet from June 5th-7th in Juneau, Alaska. Agenda topics include updates from EPA headquarters and Region 10 leadership on water quality standards and fish consumption rates, drinking water and the Backhaul Alaska Pilot Project. In addition, Tribal Operations Committee members will provide direct report outs to EPA leadership on environmental issues and concerns. Region 10's Deputy Regional Administrator and Tribal Policy Advisor will attend as well as several staff members.

EPA Leads Food Recovery Summit at CenturyLink Field in Seattle
On June 7th, Region 10 staff will facilitate a half-day food recovery summit at CenturyLink Stadium. The summits hosts hotel and restaurant chefs from King County and representatives from food recovery organizations across the state who will share best practices and opportunities for food recovery within the hospitality sector. The event is being hosted by the Seattle Seahawks, who are active participants in both EPA's Food Recovery Challenge and EPA's WasteWise partnership program. An audience of over 100 hotel and restaurant chefs, food and beverage directors, and sustainability managers are expected.

Region 10 Hosts Meeting of the Puget Sound Federal Task Force (WA)
On June 7th, Region 10 Administrator Chris Hladick will host two Puget Sound Federal Task Force meetings: one with regional federal leaders and a second with federal leaders and western Washington tribal leaders. The purpose of the regional federal leaders meeting is to report out on Puget Sound Action Plan accomplishments since Jan. 2017, and plan for an upcoming Federal Task Force leadership meeting later this summer in Washington, D.C. The joint federal/tribal leaders meeting is being convened to discuss updates on the Western Washington Treaty Rights at Risk issues, report out on Puget Sound Federal Task Force Action Plan accomplishments as they relate to tribal priorities, and provide an opportunity for new tribal and federal leaders to coordinate and strategize on how best to work together.

Office of Administration and Resources Management

Hot Topics:

Workgroups Established to Implement New Executive Orders
On May 25, 2018, President Trump issued three new executive orders impacting: 1) collective bargaining; 2) union official time and space; and 3) employee accountability. OARM has established three agency-wide workgroups to evaluate the executive orders and their impact on EPA, and develop recommended action plans for EPA compliance with the executive orders.

Employee Viewpoint Survey Results
As of May 29, 2018, EPA's agency-wide Employee Viewpoint Survey response rate was 36%. The government-wide response rate is 26%. Employees are encouraged to complete the survey by June 12, 2018.

Upcoming Major Decisions and Events:

None.

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Office of Air and Radiation

Hot Topics:

- **Tracking SIP Actions:**
  - Total Number of SIPs submitted to Regions in FY 2018: 199
  - Total Number of SIP Submittals with Final Action taken by the Regions in FY 2018: 157
  - Total Number of Pending SIPs: 765

- **Packages at OMB for Review:**
  - Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration (Proposed Rule)
  - NESHAP: Surface Coating of Large Appliances; Printing, Coating, and Dyeing of Fabrics and Other Textiles; and Surface Coating of Metal Furniture RTR (Proposed Rule)
  - Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes (Proposed Rule)
  - Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020 (Proposed Rule)

- **Packages that will move soon to OMB for Review:**
  - Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits (Final Rule)

- **Packages that will move soon to Signature:**
  - Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (Withdrawal of Proposed Rule)

Upcoming Major Decisions and Events:

Ozone Transport Commission (OTC)
Next Wednesday, Bill and Clint will be attending the OTC Executive Session in Baltimore. (The OTC is a multi-state organization created under the Clean Air Act that is responsible for advising EPA on transport issues and for developing and implementing regional solutions to ground-level ozone issues in the Northeast and Mid-Atlantic regions).

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Office of Chemical Safety and Pollution Prevention

IMPORTANT DEADLINES

Row	Determination Type	Pending on 5/29/2018	Determinations Completed[1] as 5/29/2018	Determinations Posted on the Website as of 5/29/2018[6]
1	# of "not likely" determinations	**1**	**122[4]**	**122[4]**
2	# of §5(e) Orders signed by both EPA and the submitter	-	**400**	**399**
3	# of §5(e) Orders signed by EPA and awaiting submitter signature	**41**	-	-
4	# of non-Order SNURs/"not likely" determinations	**0**	**0**	**0**
5	# of cases in post-FOCUS final determination development[5]	**318[3, 5]**	-	-
6	# of cases flagged for in-depth review	**43**	-	-
7	# of PMNs, SNUNs and MCANs awaiting FOCUS (within 90-day review)	**30**	-	-
8	# of LVE/LOREX exemption grants	-	**602**	**597**
9	# of LVE/LOREX exemption denials	-	**121**	**120**
10	**Total number of cases**	**433**	**1245**	-
11	Normal active workload for the New Chemicals Program	300	-	-
12	Number of cases undergoing testing or data development by submitter	74[3]	-	-
13	**Backlog[2]**	59	-	-

[1] "Determinations Completed" means that EPA has completed its reviews on these cases and that final determinations have been made by EPA under TSCA section 5(a)(3).
[2] (Total number of cases) – (Normal active workload for the New Chemicals Program) - (Number of cases undergoing testing or data development) = Backlog
[3] Of these cases, approximately 72 are "active" lung toxicity cases that are suspended while submitters either conduct or are deciding whether to conduct testing to develop data on pchem properties, exposures and toxicity.
[4] "Not Likely" determinations are not posted until the final signed determination document is prepared and has been shared with submitter.
[5] These cases are those for which Post-FOCUS work is underway to develop: not likely determinations; non-Order SNURS coupled with not likely determinations; or section 5(e) or 5(f) Orders. When the OPPT Office Director decides which of these regulatory paths to follow, the case is moved to: Row 3 when the section 5(e) or 5(f) Order is sent to the submitter for signature; Row 4 when the SNUR is published and the not likely determination document is signed; and Row 1 when the determination document is sent to the OPPT OD for signature.
[6] These are all only final determinations posted on the web: grants and denials.

Hot Topics:

Problem Formulations for First 10 Chemicals Selected for Risk Evaluation under Toxic Substances Control Act (TSCA)

On June 1, OCSPP released the problem formulation documents for public comment on the first 10 chemicals selected for risk evaluation under the amended TSCA. Asbestos, methylene chloride, 1,4-dioxane, tricholoroethylene, and cyclic aliphatic bromide cluster (HBCD) are among the first of the chemical problem formulations that were released. EPA intends to finalize these ten risk evaluations by December 2019. OCSPP

is also releasing a systematic review approach to share with the public the methodology that the TSCA program will use to ensure that the best available science is relied upon in these and other risk evaluations.

EPA Announces a Significant New Use rule (SNUR) for Certain Uses of Asbestos
EPA is proposing a SNUR for certain uses of asbestos (including asbestos-containing goods) that, when final, will require manufacturers and importers to notify EPA before starting or resuming manufacturing, importing or processing of asbestos.

Upcoming Major Decisions and Events:

The Full State FIFRA Issues Research and Evaluation Group (SFIREG) Meeting
On June 4-5, Ed Messina, Acting Deputy Director of the Office of Programs and several staff will present at the Full State FIFRA Issues Research and Evaluation Group (SFIREG) meeting on various topics, including Cooperative Federalism – Implications for State Pesticide Regulatory Programs, Pollinator Protection Activities, Dicamba, and ESA BiOp Update.

12th Antimicrobial Workshop
On June 7-8, the Office of Pesticide Program's will host the 12th Annual Antimicrobial Workshop at the Renaissance Arlington Capital View Hotel in Arlington, VA. Topics planned for discussion include, the Antimicrobial Testing Program, Updates to Electronic Submission Portal, Emerging Viral Pathogens, Update on 810 Guidelines, SmartLabel and e-CSF, and Registration Review Updates.

Office of the Chief Financial Officer

Hot Topics:

- EPA has received a total of $3.2 million from the Federal Emergency Management Agency to support FEMA's response to the Lava Flows/Volcano Eruption in Hawaii.
- OCFO continues to coordinate with the agency to review responses to House Appropriations Committee's FY 2019 budget hearings Questions for the Record (QFRs) and is reviewing the Senate Appropriations Committee's hearing transcript. OCFO expected SAC QFRs to arrive this week but those QFRs have not yet arrived.
- The HAC Full Committee mark-up of EPA's FY 2019 appropriations bill is scheduled for June 6. SAC Subcommittee and Full Committee markups are scheduled for the week of June 11.

Upcoming Major Decisions and Events:

- NPM feedback on draft materials for the FY 2018 second quarter Administrator's Performance Review were due to OCFO May 31. OCFO will consolidate and vet through the COO. The Quarterly Performance Review is scheduled for June 19 from 3-5 pm and includes all AAs and RAs.
- OPA is reviewing EPA's final draft FY 2018 second quarter Agency Priority Goal (APG) Action Plans, which address minor OMB comments. Once OPA approval is received, OCFO will provide final draft plans to OMB to meet its June 8 deadline. OMB target date for posting second quarter updates on publicly available website is June 14.

Other

- The OMB/EPA Strategic Review meeting is set for June 19 from 1-2:30 pm to discuss results of EPA senior leader assessments of progress toward the Strategic Plan, including risks to achieving strategic objectives, and management priorities focused on EPA Lean Management System deployment. OCFO is working with OMB and the Deputy Administrator's office to finalize meeting logistics. In addition to the Deputy Administrator, expected EPA participants include the COO, CFO, and AAs/DAAs (or equivalent) for OCIR, OP, OGC, OARM, and OITA.

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Office of Congressional and Intergovernmental Relations

Hot Topics:

June 7 - House Energy and Commerce Committee, Subcommittee on Energy will hold a hearing on: Hydropower Licensing and Water Quality Certification under CWA 401
(**Witness**: John Goodin, OW) and other agencies, 11 am, 2123 Rayburn

Upcoming Major Decisions and Events:

- **June 4** – Small Communities Advisory Subcommittee will have an introductory teleconference Monday at 2pm. Ken Wagner, Senior Advisor to the Administrator for Regional and State Affairs is scheduled to speak with the newly appointed and current members.
- **June 5** – Notification of Idaho NPDES transfer of authority
- **June 6**- Quarterly Outreach meeting with Intergovernmental Associations will feature an introduction of EPA Deputy Administrator Andrew Wheeler, and an opportunity for brief engagement with the representatives of attending Intergovernmental Associations. Part II of the meeting will focus on "The Federal Strategy to Reduce Childhood Lead Exposure." Dr. Hayley Hughes, EPA National Lead Coordinator, Office of the Administrator, will provide updates, and engage in dialogue with the group.
- **June 6** – House Energy and Commerce member briefing on PFAS four-step action plan w/OW, OLEM, OCSPP, ORD
- **June 6&7** – Senator McCain, Rio Salado Federal Partners Tour, Tempe AZ
- **June 8** - US Conference of Mayors 86th Annual Meeting in Boston, MA
- **June TBD** – Senator Baldwin staff call on PFAS actions w/OW
- **June TBD** – Congressman Latta staff and HEC staff briefing on HABs in drinking water
- **June TBD**- Congressman Doyle staff briefing re: PFAS actions
- **TBD** – Cong. Peters (CA) TA re Point Loma WWTP legislation w/OW, OGC, R9
- **TBD** – Sen. Tester (MT) staff briefing on Elk River Watershed w/OW, R8
- **TBD** – Sen. Isakson (GA) staff briefing on new chemicals process w/OCSPP
- **TBD** – Approps staff briefing on PRIA fees w/OCSPP, OCFO
- **TBD** - SEPW/HEC staff briefing on TSCA first 10 chemical problem formulations w/ OSCPP

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Office of Enforcement and Compliance Assurance

Hot Topics:

Construction Company Pleads Guilty for Not Following Lead Rules
On May 22, 2018, Bitner Brothers Construction, Inc. pleaded guilty in the Middle District of Pennsylvania on one count of violating TSCA and one count of Aiding and Abetting. Both Bitner Brothers Construction and owner Charles H. Bitner, Jr. will forfeit their lead certification licenses. Bitner Brothers Construction, Inc. is in the business of conducting residential and commercial renovations, repairs, and painting. Bitner Brothers did not follow required work practice standards during the replacement of windows in an apartment complex located in Harrisburg, Pennsylvania in early 2017.

Five Pennsylvania Men Charged with Conspiring to Defraud the U.S. and Violate the Clean Air Act
On May 25, 2018, Gavin Rexer, Dennis Paulhamus, Timothy Sweitzer, Joseph Powell, and John Joseph were charged with conspiring to impede the lawful functions of the EPA and DOT and to violate the Clean Air Act. Rexer, Powell, and Joseph were employees of Rockwater Northeast, a company that serviced the fracking industry. In the course of their employment, they conspired to modify the emissions systems on approximately 30 Rockwater heavy-duty diesel trucks by using "defeat devices." The defeat devices were obtained from Paulhamus and Sweitzer and their purchases were concealed in Rockwater's books and records by mislabeling them as exhaust systems. The conspirators also are accused of taking the modified commercial motor vehicles to state approved inspection stations, including Sweitzer's Garage, to pass federally regulated commercial motor vehicle inspections falsely.

Army Pays Stipulated Penalty to Resolve Violations at the Umatilla Army Depot
On May 14, 2018, the United States Army paid a stipulated penalty of $125,000 to EPA to resolve violations of the CERCLA Federal Facilities Agreement (FFA) for the Umatilla Army Depot after receiving a Congressional appropriation for the penalty. On July 14, 2016, EPA Region 10, the Army, and the Oregon Department of Environmental Quality signed a settlement agreement to resolve violations set forth in a November 2, 2015, Notice of Violation. The Army's failed to comply with several remedial action requirements contained in the Workplan for Munitions and Explosives of Concern. The settlement agreement included a new schedule and technical approach for the work remaining to be done at Umatilla along with an agreement that the Army would pay a stipulated penalty of $125,000 after it obtained Congressional authorization to pay the penalty.

Upcoming Major Decisions and Events:

On June 6, 2018, OECA AA Susan Bodine, PDAA Larry Starfield, and DAA Patrick Traylor will travel to EPA Region 7 to meet with the RA/DRA and senior enforcement managers in Region 7 to discuss enforcement and compliance priorities and issues.

On June 5, 2018, OECA DAA Patrick Traylor will join other EPA leaders in New Orleans, Louisiana to discuss hurricane preparedness for 2018, including lessons learned from recent natural disasters.

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Office of Environmental Information

Hot Topics:

E-Enterprise for the Environment Launches Be Well Informed – a State-developed Shared Service
Brief description: On June 6, private well owners in New Hampshire and Wyoming will have a new web-based tool to help them understand their well water test results. Originally built by the New Hampshire Department of Environmental Services, in collaboration with their Department of Information Technology, OEI adapted the tool to enable states, tribes, and territories to use this capability to develop their own tools for private well owners with minimal development costs.
Who benefits or cares: Private well owners in participating states, Commissioners with well water programs, and state environmental agencies who are responding to citizen inquiries regarding their well water.
Why this is important: The tool demonstrates how collaborative innovation and E-Enterprise can:

- Reduce costs to E-Enterprise partners (states, tribes and EPA).
- Provide consistent, timely, and actionable information to citizens.

Additional information:

- Massachusetts, Minnesota, Vermont and Michigan are working towards adopting the tool; other states and tribes have expressed interest.
- This work was partially supported by E-Enterprise funding provided by OCFO.
- As E-Enterprise resources allow, OEI will work with other states/tribes/territories to support this shared service.

Upcoming Major Decisions and Events:

None.

Office of General Counsel

Hot Topics:

- *Charles A. Folsom v. USACE*, No. 4:17-cv-3143 (D. Neb.). New development: On May 30, Charles Folsom, a Nebraska landowner, filed a notice of appeal to the US Court of Appeals for the Eighth Circuit challenging a decision from the US District Court for the District of Nebraska granting EPA's motion to dismiss his challenge to pre-enforcement activities by EPA and the Corps regarding the placement of fill into the Elkhorn River. EPA sent Mr. Folsom a proposed compliance order and invited him to negotiate and Mr. Folsom declined and sued EPA and the Corps to enjoin them from bringing any enforcement action. The District Court dismissed the complaint.
- *Ctr. for Envtl. Health v. Pruitt,* No. 3:18-cv-03197 (N.D. Cal). New development: On May 30, three NGOs filed a complaint against EPA and FWS for failing to comply with section 7 of the ESA with respect to the registration or reregistration of 21 pesticide products containing the active ingredient malathion. Plaintiffs assert that EPA and FWS have failed to meet their substantive duty to ensure that the malathion products do not jeopardize endangered and threatened species, and that EPA and FWS's agreement to indefinitely extend the current ESA consultation on malathion is unlawful.
- *Ctr. For Biological Diversity v. EPA,* No. 1:18-cv-1219 (D.D.C.). New development: On May 25, Plaintiff filed a FOIA lawsuit alleging that EPA has not responded to five FOIA requests and one FOIA fee waiver administrative appeal. The FOIA requests sought all communications to or from Administrator Pruitt including emails, text messages, and phone logs generally, and on a variety of topics including ethics, "sue and settle," encrypted messaging and email records management.
- *Husch Blackwell v. EPA*, No. 1:18-cv-1213 (D.D.C.). New development: On May 25, the law firm, Husch Blackwell, filed a FOIA lawsuit alleging that EPA failed to respond to a FOIA request within the statutory time frame for a request seeking certain communications involving Jess Rowland and glyphosate or Proposition 65.
- *Sanitary Bd. of the City of Charleston, W. Virginia v. Pruitt,* No. 2:16-cv-03060 (S.D.W. Va.). New development: On May 24, Plaintiff filed a notice of appeal to the US Court of Appeals for the Fourth Circuit challenging two decisions from the US District Court, prompted by EPA's disapproval of a site-specific copper criterion that was submitted by WVDEP at Plaintiff's request. Plaintiff is challenging the District Court's rulings that (1) EPA did not have a mandatory duty to approve the site-specific criterion and (2) Plaintiff lost standing to challenge the disapproval when WVDEP issued the facility a new permit, which did not impose any copper limits on its discharge.
- *Dine' Citizens Against Ruining the Env't v. EPA*, No. 18-71481 (9th Cir.). New development: On May 23, five NGOs filed a petition for writ of mandamus asking the Ninth Circuit to compel EPA Region 9 to take final action on a Clean Water Act NPDES permit renewal application for the Four Corners Power Plant located on the Navajo Nation, near Farmington, New Mexico. According to the Petition, the coal-fired power plant has been operating under an expired administratively continued permit since 2006.

Upcoming Major Decisions and Events:

6/12 Hearing on EPA's motion to stay in *Ass'n of Irritated Residents v. EPA*, a deadline suit regarding EPA's failure to take action on the San Joaquin Valley Unified Air Pollution Control District's 2016 SIP addressing nonattainment requirements for the 2008 8-Hour Ozone Standard.

Office of International and Tribal Affairs

Hot Topics:

Tijuana Spill
OITA met with the new U.S. Consulate General to Tijuana to discuss the Tijuana spill, International Boundary and Water Commission (IBWC), North American Development Bank and U.S.-Mexico Border Program. At our urging, the Consulate General has agreed to raise the Tijuana spill and funding for Tijuana infrastructure improvements with the local and national governments in Mexico. She also agreed to look into IBWC funding mechanisms and operations at the State Department.

Columbia River Treaty
The formal negotiations between the U.S. and Canada for the modernization of the Columbia River Treaty commenced this week. The U.S. negotiation team consists of the State Department, Interior/NOAA, and Bonneville Power. OITA and Region 10 met with the State Department to discuss the role of EPA and tribes in the negotiations, and State has agreed to involve EPA in the USG strategy sessions and ensure meaningful engagement with the tribes.

Upcoming Events and Decisions:

G7 Deputies Meeting
A Deputies Meeting will be held on June 1 to discuss the upcoming G7 Leaders' Summit in Charlevoix, Quebec on June 8-9, which includes Climate Change, Energy and Oceans session.

Premier of Saskatchewan
The Administrator will be meeting with the Premier of Saskatchewan, Canada, on June 6 to discuss Canada-U.S. environmental regulation.

North American Development Bank
OITA will be meeting with the North American Development Bank on June 4 to discuss current activities and upcoming Board of Directors meeting in Mexico.

Canadian Environmental Assessment Agency
The Canadian Environmental Assessment Agency will be meeting with OP and OITA on June 6/7 to discuss the EIA process, including transboundary impacts and tribal engagement.

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Office of Land and Emergency Management

Hot Topics:

- **Coal Combustion Residuals (CCR)**. (see below)

- **Clean Air Act 112(r) Risk Management Program (RMP) Reconsideration NPRM.** The proposed rule was published in the FR on May 30. A public hearing is scheduled for June 14. The public comment period ends July 30, 2018.

- **Ongoing major Superfund NPL sites** (including Colorado Smelter, East Chicago, West Lake, Bonita Peak, Hudson River, Portland Harbor, Mississippi Phosphates, Oak Ridge, Edwards AFB, Berry's Creek, American Cyanamid).

- **CERCLA 108(b) Financial Assurance – Next Three Sectors**. We are working with OGC, OP, and the AO to plan our approach to the next three sectors.

- **PFOA and PFAS.**
    - Working with OCIR, OW, and others, we are preparing for a briefing on PFAS with House Energy and Commerce members.
    - We are working with ORD and OW to develop groundwater cleanup recommendations for PFOA and PFOS.
    - OLEM is working with the AO, OGC, OECA and other AAships to look at available statutory mechanisms for PFOA and PFOS to be "hazardous substances" under CERCLA.

- **Emergency Response.** Region 9 emergency response and the national Environmental Response Team are part of the inter-governmental effort addressing volcano activity in Hawaii. OAR and ORD are assisting OLEM and Region 9 with public messaging related to acute and chronic risk from exposure to volcanic gases. Current staffing is 24.

Upcoming Major Decisions and Events:

- **Definition of Solid Waste Vacatur.** This was published in the FR on May 30, 2018.

- **Coal Combustion Residuals**.
    - We plan to get the proposed rule to OMB next week and anticipate signature on June 14 to align with the approval of Oklahoma's CCR permitting program.
    - Georgia submitted its CCR permit program application to EPA. It is undergoing review.

- **E-Manifest**. We anticipate issuing a press release on June 29, 2018.

- **Hazardous Waste Pharmaceuticals Final Rule**. We will be briefing the AO and OP in early June.

- **Hazardous Substances Spill Prevention Proposed Rule**. We anticipate OMB clearance by June 8 to allow for signature by June 15.

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Office of Policy

Upcoming Major Decisions and Events:

Meeting with Canada
On June 6-7, the Office of Federal Activities will join OITA, the State Dept., and CEQ in a meeting with representatives from the Canadian government to discuss best practices for Environmental Impact Assessment and transboundary issues.

Community Assistance Announcement
In early June, the Office of Community Revitalization plans to announce six communities selected for assistance through the Healthy Places for Healthy People program, a federal initiative that works with healthcare facilities to protect the environment, improve public health, and support reinvestment in neighborhoods.

Number of Actions to OFR this Year:

- Signed by Regions:
  - Notices: 40
  - Proposed Rules: 123
  - Direct Final Rules: 8
  - Withdrawal of Proposed Rule: 1
  - Withdrawal of Direct Final: 4
  - Final Rules: 101
- Signed by HQ:
  - Notices: 204
  - Proposed Rules: 32
  - NPRM Extension: 1
  - Withdrawal of Direct Final: 1
  - Interim Final: 1
  - Final Rules: 64

Number of Actions to OFR this Week (May 25 – May 31):

- Signed by Regions:
  - Notices: 4
  - Proposed Rules: 13
  - Direct Final Rules: 0
  - Withdrawal of Proposed Rule: 0
  - Withdrawal of Direct Final: 1
  - Final Rules: 5
- Signed by HQ:
  - Notices: 11
  - Proposed Rules: 1
  - NPRM Extension: 0
  - Withdrawal of Direct Final: 0
  - Interim Final: 0
  - Final Rules: 5

Active Interagency Reviews from OMB	
Title	**OMB Due Date**
DOL/MSHA RFI: "Retrospective Study of Respirable Coal Mine Dust Rule"	05/30/2018
FAR Case 2017-014 ANPRM: "Federal Acquisition Regulations: Use of Acquisition 360 to Encourage Vendor Feedback"	06/01/2018

USDA ANPRM: "Oil and Gas Resources"	06/01/2018
USDA ANPRM: "Locatable Minerals"	06/01/2018
DOI & DOC NPRM (Pass-back): "Endangered and Threatened Wildlife and Plants; Revision of Regulations for Interagency Cooperation"	06/01/2018

Documents Submitted to OFR from May 23 - 29, 2018		
FRL	**Title**	**Date Submitted to OFR**
9978-93-Region 4	Air Plan Approval and Air Quality Designation; SC; Redesignation of the Greenville-Spartanburg Unclassifiable Area	5/29/2018
9978-92-Region 4	Air Plan Approval; South Carolina; Regional Haze Plan and Prong 4 (Visibility) for the 2012 PM2.5, 2010 NO2, 2010 SO2, and 2008 Ozone NAAQS	5/29/2018
9978-90-Region 4	Air Plan Approval and Air Quality Designation; AL; Redesignation of the Etowah County Unclassifiable Area	5/29/2018
9978-72-Region 8	Interstate Transport Prongs 1 and 2 for the 2010 Sulfur Dioxide (SO2) Standard for Colorado, Montana, North Dakota, South Dakota and Wyoming	5/29/2018
9974-26-Region 8	North Dakota Final Authorization and Incorporation by Reference of Approved State Hazardous Waste Management Program	5/29/2018
9978-73-OEI	Information Collection Request Submitted to OMB for Review and Approval; Comment Request; Plant-Incorporated Protectants; CBI Substantiation and Adverse Effects Reporting	5/29/2018
9978-77-ORD	Ambient Air Monitoring Reference and Equivalent Methods; Designation of One New Reference Method	5/29/2018
9977-72-OAR	Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards	5/29/2018
9978-94-Region 4	Approval of TN Plan for Control of Emissions from Commercial and Industrial Solid Waste Incineration Units	5/25/2018
9978-87-Region 5	Air Plan Approval; Ohio; Cleveland, PM2.5 Attainment Plan	5/25/2018
9978-86-OAR	Proposed Information Collection Request; Comment Request on Two Proposed Information Collection Requests	5/25/2018
9978-80-Region 7	Delegation of Authority to the States of Iowa; Kansas; Missouri; Nebraska; Lincoln-Lancaster County, NE; and City of Omaha, NE, for New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP) Including Maximum Achievable Control Technology (MACT) Standards	5/25/2018
9978-56-Region 3	Approval and Promulgation of Air Quality Implementation Plans; Maryland; Continuous Opacity Monitoring Requirements for Municipal Waste Combustors	5/25/2018
9977-76-OCSPP	Pesticide Emergency Exemptions; Agency Decisions and State and Federal Agency Crisis Declarations	5/25/2018
9977-62-OCSPP	Defensin Proteins Derived from Spinach in Citrus Plants; Temporary Exemption from the Requirement of a Tolerance	5/25/2018
9976-99-OCSPP	Product Cancellation Order for Certain Pesticide Registrations and Amendments to Terminate Uses	5/25/2018
9978-74-Region 4	Public Water System Supervision Program Revision for the Commonwealth of Kentucky	5/25/2018

9978-82-Region 9	Air Quality State Implementation Plans: Arizona; Approval and Conditional Approval of State Implementation Plan Revisions; Maricopa County Air Quality Department; Stationary Source Permits	5/25/2018
9977-80-Region 8	National Oil and Hazardous Substances Pollution Contingency Plan; National Priorities List: Deletion of the Davenport and Flagstaff Smelters Superfund Site	5/25/2018
9978-81-Region 9	Approval and Promulgation of Air Quality Implementation Plans; Nevada; Rescission of Regional Haze Federal Implementation Plan for the Reid Gardner Generating Station	5/25/2018
9978-79-Region 7	Approval of Nebraska Air Quality Implementation Plans; Title 129, Chapter 20, Particulate Emissions; Limitations and Standards	5/24/2018
9978-78-Region 7	Approval of Missouri Air Quality Implementation Plans; Infrastructure SIP Requirements for the 2012 Annual Fine Particulate Matter (PM2.5) National Ambient Air Quality Standard Interstate Transport	5/24/2018
9978-27-Region 1	Air Plan Approval; New Hampshire; Nonattainment Plan for the Central New Hampshire Sulfur Dioxide Nonattainment Area	5/24/2018
9978-26-Region 1	Air Plan Approval; Connecticut; Volatile Organic Compound Emissions from Consumer Products and Architectural and Industrial Maintenance Coatings	5/24/2018
9977-56-OLEM	Response to Vacatur of Certain Provisions of the Definition of Solid Waste Rule	5/24/2018
9978-49-OECA	Proposed Information Collection Request; Comment Request; See Item Specific ICR Titles Provided in the Text	5/24/2018
9974-81-OEI	NESHAP for Beryllium Rocket Motor Fuel Firing (Renewal)/ICR No.1125.0	5/24/2018
9975-90-OEI	NSPS for Glass Manufacturing Plants (Renewal)/ICR No.1131.12	5/24/2018
9978-66-Region 5	Adequacy Status of the Indiana Portion of the Chicago-Naperville, IL-IN-WI Area for the Submitted 2008 Ozone Standard Fifteen Percent Rate of Progress Plan for Transportation Conformity Purposes	5/24/2018
9978-61-Region 5	Air Plan Approval; Michigan; Regional Haze Progress Report	5/23/2018
9978-59-Region 4	Air Plan Approval and Air Quality Designation; KY; Redesignation of the Kentucky Portion of the Louisville Unclassifiable Area	5/23/2018
9978-57-Region 3	Approval and Promulgation of Air Quality Implementation Plans; Virginia; Emissions Statement Rule Certification for the 2008 Ozone National Ambient Air Quality Standard	5/23/2018
9978-18-Region 9	Approval of California Air Plan Revisions; Butte County Air Quality Management District; Stationary Source Permits	5/23/2018
9976-24-OCSPP	Agency Information Collection Activities; Proposed Renewal of Several Currently Approved Collections (EPA ICR Nos. 2491.04 and 2475.03); Comment Request	5/23/2018
9978-69-OEI	EPA's In-Use Vehicle and Engine Testing Programs, ICR No. 0222.11	5/23/2018
9978-68-OEI	NESHAP for Group I Polymers and Resins (Renewal)" ICR No. 2410.04	5/23/2018
9978-60-OEI	NESHAP for Pharmaceuticals Production (Renewal)/ICR No. 1781.08	5/23/2018

9976-72-Region 6	Clean Air Act Operating Permit Program; Petitions for Objection to State Operating Permit for ExxonMobil Corporation, ExxonMobil Baytown Refinery, Harris County, Texas	5/23/2018
9978-58-ORD	EPA Board of Scientific Counselors Notice of Charter Renewal	5/23/2018
9978-53-OLEM	Agency Information Collection Activities; Proposed Collection; Comment Request; Continuous Release Reporting Regulations (CRRR) under CERCLA 1980 (Renewal); EPA ICR No. 1445.13, OMB Control No. 2050-0086	5/23/2018
9978-54-OW	Extension of the Application Deadline Date for Credit Assistance under the Water Infrastructure Finance and Innovation Act (WIFIA) Program	5/23/2018
9978-75-Region 10	Air Plan Approval; Washington; Regional Haze Progress Report	5/23/2018

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Office of Research and Development

Hot Topics:

***Fentanyl Fact Sheet* for On-Scene Coordinators**
Nearly half (over 19,000) of the opioid-related deaths in the U.S. in 2016 involved fentanyl. EPA and state-level responders have emphasized the lack of comprehensive information on the detection, sampling, analysis and decontamination for the fentanyl class of synthetic opioid chemical compounds. ORD partnered with Office of Emergency Management's CBRN Consequence Advisory Division and Environmental Response Team, Region 5, and others to develop *the Fentanyl Fact Sheet*. It is living document that compiles current, publicly-available information for use by EPA OSCs, and may also be useful to local/state first responders such as EMT, hazmat, and law enforcement. ORD's research underway on fentanyl sampling methods and decontamination will strengthen the fact sheet over time.

Technical support on Tularemia to the Kentucky Department of Public Health
ORD is supporting the Kentucky Department of Public Health in their response to a tularemia outbreak in Butler County, Kentucky. The causative agent of tularemia, *Francisella tularensis*, is classified as a Tier 1 Select Agent by the U.S. government due to its low infectious dose, ease of spread by aerosol, and high virulence. This outbreak has affected cottontail rabbits, Beagle handlers, and Beagle dogs residing in a 240-acre beagle field trial ground. Humans can be infected with the organism by contact with infected animals or vectors. To better understand the cause of the outbreak, ORD is guiding Kentucky Department of Public Health on sampling and analysis of *Francisella tularensis* in environmental samples, and providing advice on collection and stabilization of water samples and possible causes of the outbreak.

IRIS Assessment Released for Review
On May 30th, the draft assessment for hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) was released for post-peer review Interagency and Agency review.

Upcoming Major Decisions and Events:

We look forward to hosting OCSPP leadership in RTP on June 8 where we will discuss ORD data, methods, and tools being developed to support TSCA prioritization. On June 5th ORD staff will kick off summer with an evening of baseball at National's Park.

Science Advisory Board Meeting
On June 1st, ORD will provide an update on IRIS at the Science Advisory Board meeting. ORD will also present an overview of lead science that highlights seven success stories. Other participants and presenters include the Office of the Administrator on the Federal Lead Strategy, Office of Water, Office of Land and Emergency Management, and Office of Chemical Safety and Pollution Prevention.

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Office of Water

Hot Topics:

Georgia Nonpoint Source Pollution Control Program
Today, Dave Ross co-signed a joint EPA/NOAA Federal Register Notice announcing the agencies' intent to fully approve the Georgia Coastal Nonpoint Pollution Control Program. The notice invites public comment on the agencies' proposed finding that Georgia has satisfied all conditions on the 2002 approval of the State's coastal nonpoint pollution control program. The Coastal Zone Act Reauthorization Amendments directs states and territories with coastal zone management programs previously approved under Section 306 of the Coastal Zone Management Act to develop and implement coastal nonpoint programs, which must be submitted to the federal agencies for approval. The notice will be sent to NOAA next for signature. Once published, the notice will open a 30-day public comment period.

WIFIA
As part of OW's enhanced outreach strategy to promote the 2018 Notice of Funding Availability (NOFA) opportunity, this week, the WIFIA program hosted the WIFIA Letter of Interest Submission and Selection Process Question and Answer Session. More than 70 people participated in the event. The next webinar, scheduled for June 4, will provide an overview of the WIFIA program and the 2018 selection round. In addition, OW, working with OPA, provided the regional public affairs directors with a "pitch" packet to use with local media outlets as well as key messages to fold into senior leadership speeches. Tomorrow, the WIFIA staff will present at the New England Environmental Business Council Infrastructure Workshop: Update and Overview of WIFIA Water Infrastructure Loan Program.

Environmental Financial Advisory Board (EFAB) Membership Package
This week, the EFAB's 2018 Official Membership Package was approved and is moving forward for the Administrator's signature. The package includes a new recommended chair, 4 new EFAB member appointments, and 3 departures. The term for appointees will run for a period of two years beginning June 15.

Waterkeeper II Steam Electric FOIA
This week, OW provided the May interim release for this FOIA to the requestor. The EPA was under court order to complete this FOIA by May 31st, however, the court granted an extension of that deadline to June 21, 2018.

Upcoming Major Decisions and Events:

HEC Hearing
Next week, John Goodin, Acting Director for the Office of Wetlands, Oceans and Watersheds, will testify before the House Committee on Energy and Commerce (HEC), Energy Subcommittee. He will testify to the EPA's role on the CWA section 401 state delegated authority and water quality certification process in relation to the non-federal hydropower licensing process. The panel is comprised of officials from FERC, NOAA, FWS, and USACE. The hearing is open to press.

EPA-National Tribal Water Council Meeting
Next week, Benita Best Wong will provide the opening remarks for the Council meeting and discuss with members' water issues in Indian country. This meeting is closed to press.

Public Meeting on Unregulated Contaminants in Drinking Water
Next week, the EPA will host an all-day public meeting and webinar at EPA-Cincinnati. Approximately 300 participants have registered for the meeting which will include presentations from the Technical Support Center in Cincinnati and ORD on the EPA drinking water method development and include discussion with stakeholders on innovative analytical testing procedures for unregulated contaminants.

Region 1

Hot Topics:

Parties Reach Significant Agreement in Principle on Priority Superfund Site
EPA, the State of Rhode Island, and Black & Decker have reached a mediated agreement in principle on the Consent Decree (CD) and Statement of Work (SOW) at the Centredale Manor Site in North Providence, RI. EPA will likely sign in early June. The CD will be lodged with the Court in mid-June. Under the terms of the CD, the PRPs will begin performance on the RD upon lodging. This Site is on Administrator Pruitt's list of sites targeted for immediate, intense action.

NH MS4 Permit Mediation Kicks-off
This week, mediation began among the appellants of the NH MS4 general permit for small municipalities. While the state of New Hampshire is not a party to the litigation, Region 1 secured the agreement of all parties to the state's participation in the mediation. Mediation for the Massachusetts MS4 general permit, which started last week, continues.

Lead Paint Removal Contractors Receive Notice of Upcoming Lead Inspections
Region 1 began outreach to contractors located in our two focus communities of Portsmouth, NH and Portland, ME. An initial mass mailing of 171 letters, including 23 to those whose lead removal firm certification has expired were sent to Portsmouth contractors. The letters provided information on EPA's initiative, lead-based paint rules, lead in drinking water, and on how to identify EPA accredited trainers in their area. A similar mass mailing to Portland contractors is expected to go out next week. Region 1 is coordinating these efforts with local and state officials as well as community groups.

Upcoming Major Decisions and Events:

Charles River (Massachusetts) Receives an A- in Annual Water Quality Report Card Announcement
On June 1, Region 1 will announce its 23rd annual grade for water quality in the Charles River. The grade of A- reflects 2017 data showing that the river met boating standards 95% of the time and swimming standards 72% of the time. This is only the second time that the Charles has achieved a grade this high.

RA Dunn, Erin Chancellor and Steven Cook to meet with concerned citizens at Coakley Superfund Site
On June 4, RA Dunn, Adviser Erin Chancellor and Deputy AA Steven Cook will visit the site and meet with Community Activist Jillian Lane and concerned neighborhood citizens. This visit is a follow-up to Albert Kelly's commitment to Jillian Lane that he would visit the site.

RA Dunn and Erin Chancellor to participate in two New Bedford Harbor events with Mayor Mitchell
On June 5, RA Dunn and Adviser Erin Chancellor will participate in an onsite celebration of the completion of the Pierce Mill Cove cleanup and the reopening of Riverside Park. Following the celebration, they will participate in a roundtable with Mayor Mitchell on his plans for economic growth and development of the New Bedford Harbor. MassDEP and USACE will also be in attendance.

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Region 2

Hot Topics:

Consent Order with National Grid at Gowanus Canal Superfund Site
On 5/24 Region 2 finalized this consent order, which provides for extensive cleanup work with an estimated value of about $100 million. Under the order National Grid will construct a sealed barrier wall to contain coal tar migration from its former Fulton Manufactured Gas Plant site; remove coal tar at two properties following their acquisition by New York City for construction by the City of an 8-million gallon CSO retention tank (required under the 2013 Record of Decision for the site); remove coal tar from beneath an adjacent City-owned public park and swimming pool; and develop plans for and provide a temporary and permanent replacement swimming pool facility. The order provides for close coordination of work by National Grid with work required by EPA's 2016 consent order with New York City addressing the property acquisition, design of the CSO retention tank, and related matters. Finally, the Order provides for the reimbursement of EPA's oversight costs.

"General Duty Clause" Compliance Order Issued to Shamrock Enterprises
On 5/29 Region 2 issued an order regarding Shamrock's failure to comply with §112(r) of the Clean Air Act, known as the "general duty clause," at its Franklinville, NJ facility. At the facility, which is near residences, Shamrock sells, stores, and handles compressed gases including acetylene and propane, which are extremely hazardous substances. Shamrock failed to identify potential hazards from accidental releases, and to design and maintain a safe facility so as to prevent releases. EPA inspected the facility at the request of New Jersey; state and local agencies participated in the inspection. The Order calls for proper handling and storage of extremely hazardous substances, and compliance with applicable industry standards and safety regulations, including fire code requirements.

Chemours Chambers Works/Deepwater, NJ
Chemours responded to EPA's questions regarding GenX, and we have begun our review of the document. Within the next one to two weeks we expect to start receiving results of Chemours' sampling for GenX in nearby monitoring and residential wells starting as early as next week. NJDEP has received an Order to Show Cause initiated by the Township of Carney's Point, which is near the Deepwater facility. The Town seeks NJDEP approval of a public participation plan for the Township. Chemours has agreed to develop a public website similar to the one that was set-up for Chemours' Fayetteville, NC site; development of the website should take about a month.

Wolff-Alport Superfund Site, Brooklyn, NY
RA Pete Lopez and staff met on 5/30 with Congresswoman Nydia Velasquez to brief her on progress at this site. At her request, Region 2 will organize a public availability session to update the community about the work at the site, probably on June 18.

Upcoming Major Decisions and Events:

Confidential: Settlement with NYC Housing Authority (NYCHA)
As of this writing, the announcement of the settlement with NYCHA is expected to occur on June 5th at noon at the U.S. Attorney's Office in Manhattan. We expect that Susan Bodine will attend.

June 6: RA Pete Lopez will give keynote remarks at Columbia Law School's "Key Environmental Issues in EPA Region 2," a biennial conference co-sponsored by the American Bar Association. The conference will also feature a panel discussion among the RA and the environmental commissioners of NY, NJ, PR and the USVI.

June 7: Deputy Administrator Wheeler will be visiting Region 2, with a planned tour of Gowanus Canal.

June 18: Region 2 leadership will be participating in a Lake Guardian event in Rochester, NY to highlight the survey of Lake Ontario (dive and sampling missions by EPA staff).

Region 3

Hot Topics:

Lead-Based Paint Program Continues Outreach Efforts in Philadelphia
LCD managers and staff met with the City of Philadelphia Department of Public Health's Director of Environmental Health Services and the Program Administrator of the Lead and Healthy Homes Program to continue discussing potential partnership opportunities. The City expressed interest in working together on outreach campaigns, especially to child care centers in Philadelphia. LCD learned more about the City's laws and programs related to lead-based paint in child care centers, as well as communication channels, outreach initiatives, training sessions, and inter-agency meetings, which may provide opportunities for collaboration. LCD will speak with the City again in June to follow up on this conversation.

Administrative Settlement Executed on Delaware Sand & Gravel Landfill Superfund Site, New Castle, Delaware
An Administrative Settlement Agreement and Order on Consent (AOC) for remedial design (RD) was executed on May 22, 2018, which is 31 work days after EPA waived special notice procedures and invited the Delaware Sand & Gravel Landfill (DS&G) Remedial Trust to negotiate the agreement. Respondents to the AOC will complete pre-design investigations and the RD and install two groundwater interceptor wells to begin implementation of EPA's December 2017 Amendment No. 2 to the 1988 Record of Decision. EPA also issued letters to the potentially responsible parties at the adjacent Army Creek Landfill Superfund site to encourage their continued negotiation of an allocation agreement with the DS&G Remedial Trust for performance of the remedial action under a future consent decree.

EPA Region III Reissues DC MS4 Permit
On Wednesday, May 23, 2018, EPA reissued the Municipal Separate Storm Sewer System NPDES permit for the District of Columbia (DC MS4).
The DC MS4 permit had been administratively extended since it expired in October 2016. EPA worked closely with the District of Columbia in drafting this permit and considered numerous public comments from a variety of stakeholders. The DC MS4 permit will take effect June 22, 2018.

EPA Certified Lead Renovator Company Pleads Guilty for Failing to Follow Safe Work Practices to Reduce a Lead Hazard Exposure Under Toxic Substances Control Act (Criminal Case No. 1:18-Cr-00157 Middle District of Pennsylvania)
On May 22, 2018, Bitner Brothers Construction Company, Inc. (Bitner Brothers) of Carlisle, Pennsylvania entered a two-count plea for violating safe work practices promulgated under the Toxic Substances Control Act (TSCA), and aiding and abetting. In February 2017, Bitner Brothers conducted the work inside two apartments In Harrisburg, Pennsylvania while families with small children were present. The company failed to comply with the regulation requiring that power grinding must have a shroud or containment system equipped with a HEPA vacuum during the renovation pursuant to Title 15, United States Code, Sections 2689 and 2615(b).

As part of the plea agreement, the defendant, and its President and owner, Charles H. Bitner, Jr., were directed not to undertake new work contracts that require a special skill, training or certification related to the handling and/or management of lead, including lead-based paints, for the period of probation. Magistrate Judge Martin Carlson accepted the plea and set a sentencing date for September 18, 2018. The maximum penalty for that offense is a fine of $200,000, a maximum period of probation of five years, as well as the costs of prosecution or probation, and a special court assessment.

Upcoming Major Decisions and Events:

None.

Region 4

Hot Topics:

Daicel Safety Systems (Beaver Dam, KY)
Key Message: During the week of May 29, 2018, Region 4 Administrator Trey Glenn informed the Commissioner for the Kentucky Department for Environmental Protection that EPA will defer to the state regarding the permit for Daicel Safety Systems.

Subtropical Storm Alberto
Key Message: Region 4, in coordination with Florida, Alabama, and Mississippi, conducted an assessment to identify any impacts from the storm to wastewater treatment facilities, Risk Management Plan facilities, or Superfund sites. No issues were identified.

Kentucky 2016 303(d) List Approval
Key Message: Region 4 has determined that Kentucky's 2016 303(d) List update substantially meets the intent of section 303(d) of the CWA and the EPA's implementing regulations. The Region is approving all the changes identified by the Commonwealth of Kentucky. Specifically, Region 4 approves Kentucky's decision to include approximately 350 additional pollutant-waterbody combinations on the section 303(d) list, and concurs with the delisting of 68 pollutant-waterbody combinations, Region 4 does not anticipate objections from stakeholders or the public nor anticipates media interest.

Upcoming Major Decisions and Events:

Decisions
Grenada – The Region's position based on the information and proposed remedy submitted by the PRP.

Events
Regions 4, 6 and Gulf of Mexico Program Office Meeting
On June 4, 2018, Region 4 Administrator Trey Glenn, Region 6 Administrator Anne Idsal, and other regional senior leadership will meet to discuss future engagement and support from the Gulf of Mexico Program Office and tour ongoing projects with partner agencies. New Orleans, LA. Closed Press.

Hurricane Preparedness Meeting
On June 5, 2018, Region 4 Administrator Trey Glenn will participate in a hurricane preparedness meeting with other senior leaders from Region 4, Region 6, and various headquarters offices. New Orleans, LA. Closed Press.

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Region 5

Hot Topics:

EPA Reaches Agreement in Principle with Crown Enterprises Inc. Regarding the McLouth Steel Property
Key Message: Crown Enterprises and its affiliate, MSC Land Company LLC, are expected to acquire the property, which is currently held by the Wayne County Land Bank.

The agreement will provide the companies with legal protections in exchange for cleanup work at the property. EPA, Michigan Department of Environmental Quality, U.S. Department of Justice, Crown and MSC devoted considerable time to this agreement, and EPA believes it will benefit the public by allowing for the reuse of contaminated land. EPA expects that the agreement can be finalized within the next 120 days.

EPA Responds to Office of Inspector General's Flint Report
Key Message: On May 30, 2018, Region 5, in coordination with OECA and OW, issued a formal response to the OIG's Flint report, including concurrence with all nine of the OIG's recommendations. The response also included corrections to a series of identified factual inaccuracies that were contained in the OIG's report.

The agency is working expeditiously to implement the recommendations made by the OIG.

EPA and MDEQ Coordinating on Draft Back Forty Mine Permit
Key Message: Once MDEQ shares a revised draft, the Region will send a letter to MDEQ indicating that the current draft satisfies EPA's objections if issued by June 6.

The Region agrees that the proposed conditions would satisfy EPA objections to the State's draft CWA 404 permit, and has provided suggestions to clarify the permit language. MDEQ will revise the draft to include clarifying language and will share with EPA this week.

Upcoming Major Decisions and Events:

Region 5 to Brief Administrator Pruitt on USS Lead on June 6, 2018
Key Message: The Region will be briefing Administrator Pruitt on the draft USS Lead Zone 1 Proposed Plan Record of Decision Amendment.

The USS Lead site is on the Administrator's Emphasis List and the completion of the Zone 1 Record of Decision Amendment is the completion milestone referenced for this site. Given the sensitivity of the issues within the community and the potential for the Amendment to be greater than $50 million, a briefing for the Administrator is required and is being coordinated with HQ.

EPA to Hold a Series of Public Engagement Meetings for the Great Lakes Restoration Initiative Action Plan III
Key Message: Meetings will be held in Toledo, Ohio; Rochester, N.Y.; Duluth, Minn.; Milwaukee, Wis.; Saginaw, Mich.; and Chicago, Ill., between June 13 and August 7, 2018.

EPA and its federal partners are in the process of developing GLRI Action Plan III, which outlines Great Lakes restoration focus areas and goals for the years 2020-2024. The proposed plan will be available for formal public comment this fall.

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Region 6

Hot Topics:

HP Cylinders Emergency Response, Baytown, Texas
The company was called Stillwater Consultants, LLC, and it abandoned over 500 cylinders of compressed gas. EPA expects the contractor bids to begin to come in this week. Texas Commission on Environmental Quality (TCEQ) continues to provide 24-hour site security and conduct daily fence line air monitoring. All fence line readings have been non-detect to date. The site remains secured and conditions are stable, but being monitored closely. EPA's Emergency Response contractors are on standby in Houston and ready to respond in the event the situation changes.

US/Mexico Border Wall, McAllen, Texas
Under the recent appropriations bill the Secretary of Homeland Security is required to consult with the Secretary of Interior and the Administrator of the U.S. Environmental Protection Agency as they plan to replace existing and build the new wall and fence along the border. While the Secretary of Homeland Security issued waivers on many border wall/fence projects in 2017, DHS would like to address environmental health concerns upfront in the design and planning phase where possible. EPA joined federal officials to tour the Border Wall along the Lower Rio Grande near McAllen, Texas this week.

Carbon Black CAA Judicial Settlements, Oklahoma, Louisiana, Texas
On May 25, 2018, DOJ and EPA filed a motion to enter judicial settlements for the following consent decrees (CDs), all part of EPA's National Carbon Black Initiative: Cabot Corporation (2nd amendment to existing CD), Orion (CD), Columbian Chemicals (CD), and Sid Richardson (CD). In addition, Continental Carbon (amendment to existing CD), a motion to enter was filed and granted.

Sandow Power Plant, Rockdale, Texas
EPA anticipates that as early as June 4, 2018, the U.S. Department of Justice (DOJ) may notify Sandow Power Company LLC (SPC), an affiliate of Luminant Generation Company LLC, that the United States will join in a motion to the Court to terminate the Consent Decree (CD) relating to SPC's coal-fired power plant in Rockdale, Milam County, Texas. On January 11, 2018, SPC permanently retired Sandow Units 4 and 5, the subjects of the CD. On February 7, 2018, SPC sent a letter to DOJ and EPA requesting that the United States join in a motion to the Court to terminate the CD.

Anchor Glass Container Corporation, Henryetta, Oklahoma
The Department of Justice (DOJ) and EPA are expected to sign a Consent Decree (CD) with Anchor Glass Container Corporation (Anchor). The settlement includes glass facilities in Regions 2, 4, 5, and 6; two states, Indiana and Oklahoma, also participated in the negotiations and plan to sign the CD. The Anchor facility in Region 6 is located in Henryetta, Oklahoma, and the settlement resolves Clean Air Act violations for commencing construction without obtaining permits to comply with the Act's Prevention of Significant Deterioration requirements. Anchor will install air pollution control equipment and pay a $1.1-million-dollar penalty, with $650,000 going to the United States, and $325,000 going to each of Indiana and Oklahoma.

New Mexico NESHAP/NSPS Delegation
EPA withdrew its direct final approval of the updated of NESHAP and NSPS provisions to New Mexico Environment Department. EPA received adverse comments regarding NMED's ability and available resources to implement and enforce the NESHAP and NSPS standards.

Upcoming Major Decisions and Events:

St. James Parish South Louisiana Methanol LP, Louisiana

Region 6 intends to issue a federal register notice announcing the Administrator's decision on the South Louisiana Methanol Title V Petition. The date, while intended for June 15, is subject to change based on internal deliberations on the merits of the petition.

Arkansas State Implementation Plan
Region 6 intends to take final SIP action by June 20 to raise ADEQ's minor NSR permitting and de minimis thresholds. EPA received significant public comments on the proposed SIP changes from Sierra Club and more specifically on our 110(l) analysis (anti-backsliding into nonattainment) for the action. EPA has developed a response to those comments in the final action. This will address two backlog SIP actions.

June 4	RESTORE Project Tour, New Orleans, Louisiana
June 5	Hurricane Preparedness Meeting, New Orleans, Louisiana

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Region 7

Hot Topics:

Sporlan Valve Site Meeting Hosted by Missouri Department of Natural Resources (MDNR)
Key Message: Region 7 attended a state organized stakeholder meeting on the potential NPL listing of the Sporlan Valve site in advance of a public availability session next week.

- On May 30, MDNR and EPA Region 7 met with Washington, MO City officials, Franklin County Commissioners, the Franklin County Health Department, and State Representatives to discuss local support for adding the Sporlan Valve site to the Superfund National Priorities List (NPL). TCE has been detected in groundwater, soil gas, and indoor air of residential homes adjacent to the site and a series of actions have been taken by EPA to mitigate the threat of vapor intrusion including sampling for TCE vapors in homes and installing vapor mitigation systems. To date, EPA has installed and/or overseen the installation of 19 vapor mitigation systems at homes adjacent to the site.
- On June 5, EPA will host a Public Availability session in Washington, MO to discuss the proposal of the site to the NPL. MDNR and the Governor of Missouri want local support for proposed listing prior to EPA moving forward.

Upcoming Major Decisions and Events:

Hurricane Preparedness Meeting
Key Message: On June 5, Regional Administrator Jim Gulliford will travel to New Orleans, LA to attend the Hurricane Preparedness Meeting.

- The purpose of the meeting is to consider and address lessons learned during prior natural disasters, most notably from the 2018 hurricane and wildfire seasons, to improve EPA's natural disaster preparedness, response, and recovery efforts.
- Several EPA regions and offices have been invited to participate.

OECA Assistant Administrator Visit
Key Message: On June 6, OECA Assistant Administrator Susan Bodine will visit Region 7. Agenda sessions include opportunities for AA Bodine to meet with Superfund and Criminal Investigation Division staff, participate in an All Hands meeting for Region 7 staff, and discuss enforcement direction.

Assistant Deputy Administrator and Chief of Operations Visit
Key Message: On June 7, Assistant Deputy Administrator and Chief of Operations Henry Darwin will be at Region 7 to assess progress and provide coaching on visual management tools created during Region 7's ELMS training in late April.

Region 8

Hot Topics:

Notice of Intent to Delete the Davenport and Flagstaff Superfund Site published in FR
On June 4, EPA and the Utah Department of Environmental Quality will invite the public to comment on the proposal to delete the remaining portions (OU2, OU3 and the remaining portions of OU1) of the Davenport and Flagstaff Smelters Superfund Site from the National Priorities List.

Upcoming Major Decisions and Events:

Site Visit to Basin Electric Laramie River Station
On June 6th, R8 staff will join the Wyoming Department of Environmental Quality at the Basin Electric Laramie River Station to learn more about NO_x emission controls being installed in accordance with a settlement agreement entered into by the EPA, the state of Wyoming and Basin Electric. In accordance with the settlement agreement, the EPA must propose by October 5, 2018, a revised Federal Implementation Plan for the Laramie River Station reflecting, among other things, the agreed upon NO_x controls.

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Region 9

Hot Topics:

Hawaii Volcano Response
RA Mike Stoker met with Hawaii Governor Ige and key State leaders. We shall brief Dep. Administrator Wheeler Friday regarding our air monitoring and public communication. We plan to launch a publicly accessible website with real-time air-monitoring data (SO2, H2S, and particulates) from our 12 stations. With FEMA and HHS, we'll increase risk communication and community engagement where the County has been reticent. The State is requesting of FEMA increased federal support under ESF 8 and ESF 10 (e.g. 10 additional air monitoring stations). We're in close contact with the National Guard and Civil Support Team to address electrical power, cell phone coverage, and access to our air monitoring network.

National Oil Enforcement
We're hosting an EPA-only national oil enforcement meeting in the Regional Office, with participation from the Regions, OLEM and OECA.

Upcoming Major Decisions and Events:

Nevada
On June 5-6, RA Mike Stoker will host the Nevada Dept. of Environmental Quality executive team for two days of program meetings in San Francisco.

Arizona
June 6-7, RA Mike Stoker with participate in the Sen. McCain-hosted Rio Salado tour and meetings with Federal and State agencies, to focus on improving the environmental and economic vitality of the Salt River riparian corridor. On June 7, he'll meet with Arizona DEQ Director Misael Cabrera and present the newly awarded Performance Partnership Grant.

So. California
June 8-9, RA Mike Stoker will meet with the EPA San Diego Border Office staff and be briefed on our Mexican Border program. He will address the California Independent Petroleum Association annual conference.

American College of Environmental Lawyers
Alexis Strauss will speak June 1 at the San Francisco regional meeting of this group, which convenes in each Region and has in recent months hosted speaking engagements with Ken Wagner and Cathy Stepp.

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Region 10

Hot Topics:

Region 10 Assists Salem, OR With Harmful Algal Bloom Event and Do-Not-Drink Advisory
A harmful algal bloom has produced high concentrations of microcystins in Detroit Lake, which serves as the primary drinking water source for the City of Salem, Oregon. A recreational water advisory was issued for the lake on May 23rd, when concentrations of microcystins were measured at more than 10 times the Oregon Health Authority advisory level. Out of an abundance of caution on May 29, the City issued a do-not-drink advisory for individuals with compromised immune systems and small children. An advisory update will be issued after additional sample results come in on May 31st. EPA's role is to provide technical assistance to the state and City of Salem and answer questions related to HABs effects and treatment options. Over the past several years, Region 10 has worked to build capacity among states, tribes and local governments to identify HABs problems, the role of nutrients, and response actions, including hosting workshops and webinar-based meetings. Region 10 is following the draft HABs Response Plan template to manage our coordinated response to this incident with HQ, state, and local officials.

Upcoming Major Decisions and Events:

Region 10 Approves Idaho's NPDES Program
On June 5th, Region 10 and EPA headquarters will participate in a signing ceremony in Boise, Idaho announcing EPA's approval of the Idaho Department of Environmental Quality's wastewater discharge permit program (IPDES). Starting July 1, 2018, IDEQ will begin issuing and enforcing water pollution permits for industry and municipalities across the state. IDEQ has been working for several years to build a program that will ensure dischargers meet the state's water quality standards and protect water quality. The program will be phased in over four years and Region 10 will continue to provide technical assistance.

Region 10 Participates in Regional Tribal Operations Committee Quarterly Meeting in Juneau, AK
The Region 10 Tribal Operations Committee will meet from June 5th-7th in Juneau, Alaska. Agenda topics include updates from EPA headquarters and Region 10 leadership on water quality standards and fish consumption rates, drinking water and the Backhaul Alaska Pilot Project. In addition, Tribal Operations Committee members will provide direct report outs to EPA leadership on environmental issues and concerns. Region 10's Deputy Regional Administrator and Tribal Policy Advisor will attend as well as several staff members.

EPA Leads Food Recovery Summit at CenturyLink Field in Seattle
On June 7th, Region 10 staff will facilitate a half-day food recovery summit at CenturyLink Stadium. The summits hosts hotel and restaurant chefs from King County and representatives from food recovery organizations across the state who will share best practices and opportunities for food recovery within the hospitality sector. The event is being hosted by the Seattle Seahawks, who are active participants in both EPA's Food Recovery Challenge and EPA's WasteWise partnership program. An audience of over 100 hotel and restaurant chefs, food and beverage directors, and sustainability managers are expected.

Region 10 Hosts Meeting of the Puget Sound Federal Task Force (WA)
On June 7th, Region 10 Administrator Chris Hladick will host two Puget Sound Federal Task Force meetings: one with regional federal leaders and a second with federal leaders and western Washington tribal leaders. The purpose of the regional federal leaders meeting is to report out on Puget Sound Action Plan accomplishments since Jan. 2017, and plan for an upcoming Federal Task Force leadership meeting later this summer in Washington, D.C. The joint federal/tribal leaders meeting is being convened to discuss updates on the Western Washington Treaty Rights at Risk issues, report out on Puget Sound Federal Task Force Action Plan accomplishments as they relate to tribal priorities, and provide an opportunity for new tribal and federal leaders to coordinate and strategize on how best to work together.

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Office of Administration and Resources Management

Hot Topics:

Workgroups Established to Implement New Executive Orders
On May 25, 2018, President Trump issued three new executive orders impacting: 1) collective bargaining; 2) union official time and space; and 3) employee accountability. OARM has established three agency-wide workgroups to evaluate the executive orders and their impact on EPA, and develop recommended action plans for EPA compliance with the executive orders.

Employee Viewpoint Survey Results
As of May 29, 2018, EPA's agency-wide Employee Viewpoint Survey response rate was 36%. The government-wide response rate is 26%. Employees are encouraged to complete the survey by June 12, 2018.

Upcoming Major Decisions and Events:

None.

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Office of Air and Radiation

Hot Topics:

- **Tracking SIP Actions:**
  - Total Number of SIPs submitted to Regions in FY 2018: 199
  - Total Number of SIP Submittals with Final Action taken by the Regions in FY 2018: 157
  - Total Number of Pending SIPs: 765

- **Packages at OMB for Review:**
  - Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration (Proposed Rule)
  - NESHAP: Surface Coating of Large Appliances; Printing, Coating, and Dyeing of Fabrics and Other Textiles; and Surface Coating of Metal Furniture RTR (Proposed Rule)
  - Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes (Proposed Rule)
  - Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020 (Proposed Rule)

- **Packages that will move soon to OMB for Review:**
  - Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits (Final Rule)

- **Packages that will move soon to Signature:**
  - Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (Withdrawal of Proposed Rule)

Upcoming Major Decisions and Events:

Ozone Transport Commission (OTC)
Next Wednesday, Bill and Clint will be attending the OTC Executive Session in Baltimore. (The OTC is a multi-state organization created under the Clean Air Act that is responsible for advising EPA on transport issues and for developing and implementing regional solutions to ground-level ozone issues in the Northeast and Mid-Atlantic regions).

Office of Chemical Safety and Pollution Prevention

IMPORTANT DEADLINES

Row	Determination Type	Pending on 5/29/2018	Determinations Completed[1] as 5/29/2018	Determinations Posted on the Website as of 5/29/2018[6]
1	# of "not likely" determinations	**1**	**122[4]**	**122[4]**
2	# of §5(e) Orders signed by both EPA and the submitter	-	**400**	**399**
3	# of §5(e) Orders signed by EPA and awaiting submitter signature	**41**	-	-
4	# of non-Order SNURs/"not likely" determinations	**0**	**0**	**0**
5	# of cases in post-FOCUS final determination development[5]	**318[3, 5]**	-	-
6	# of cases flagged for in-depth review	**43**	-	-
7	# of PMNs, SNUNs and MCANs awaiting FOCUS (within 90-day review)	**30**	-	-
8	# of LVE/LOREX exemption grants	-	**602**	**597**
9	# of LVE/LOREX exemption denials	-	**121**	**120**
10	**Total number of cases**	**433**	**1245**	-
11	Normal active workload for the New Chemicals Program	300	-	-
12	Number of cases undergoing testing or data development by submitter	74[3]	-	-
13	**Backlog[2]**	59	-	-

[1] "Determinations Completed" means that EPA has completed its reviews on these cases and that final determinations have been made by EPA under TSCA section 5(a)(3).
[2] (Total number of cases) – (Normal active workload for the New Chemicals Program) - (Number of cases undergoing testing or data development) = Backlog
[3] Of these cases, approximately 72 are "active" lung toxicity cases that are suspended while submitters either conduct or are deciding whether to conduct testing to develop data on pchem properties, exposures and toxicity.
[4] "Not Likely" determinations are not posted until the final signed determination document is prepared and has been shared with submitter.
[5] These cases are those for which Post-FOCUS work is underway to develop: not likely determinations; non-Order SNURS coupled with not likely determinations; or section 5(e) or 5(f) Orders. When the OPPT Office Director decides which of these regulatory paths to follow, the case is moved to: Row 3 when the section 5(e) or 5(f) Order is sent to the submitter for signature; Row 4 when the SNUR is published and the not likely determination document is signed; and Row 1 when the determination document is sent to the OPPT OD for signature.
[6] These are all only final determinations posted on the web: grants and denials.

Hot Topics:

Problem Formulations for First 10 Chemicals Selected for Risk Evaluation under Toxic Substances Control Act (TSCA)

On June 1, OCSPP released the problem formulation documents for public comment on the first 10 chemicals selected for risk evaluation under the amended TSCA. Asbestos, methylene chloride, 1,4-dioxane, tricholoroethylene, and cyclic aliphatic bromide cluster (HBCD) are among the first of the chemical problem formulations that were released. EPA intends to finalize these ten risk evaluations by December 2019. OCSPP

is also releasing a systematic review approach to share with the public the methodology that the TSCA program will use to ensure that the best available science is relied upon in these and other risk evaluations.

EPA Announces a Significant New Use rule (SNUR) for Certain Uses of Asbestos
EPA is proposing a SNUR for certain uses of asbestos (including asbestos-containing goods) that, when final, will require manufacturers and importers to notify EPA before starting or resuming manufacturing, importing or processing of asbestos.

Upcoming Major Decisions and Events:

The Full State FIFRA Issues Research and Evaluation Group (SFIREG) Meeting
On June 4-5, Ed Messina, Acting Deputy Director of the Office of Programs and several staff will present at the Full State FIFRA Issues Research and Evaluation Group (SFIREG) meeting on various topics, including Cooperative Federalism – Implications for State Pesticide Regulatory Programs, Pollinator Protection Activities, Dicamba, and ESA BiOp Update.

12th Antimicrobial Workshop
On June 7-8, the Office of Pesticide Program's will host the 12th Annual Antimicrobial Workshop at the Renaissance Arlington Capital View Hotel in Arlington, VA. Topics planned for discussion include, the Antimicrobial Testing Program, Updates to Electronic Submission Portal, Emerging Viral Pathogens, Update on 810 Guidelines, SmartLabel and e-CSF, and Registration Review Updates.

Office of the Chief Financial Officer

Hot Topics:

- EPA has received a total of $3.2 million from the Federal Emergency Management Agency to support FEMA's response to the Lava Flows/Volcano Eruption in Hawaii.
- OCFO continues to coordinate with the agency to review responses to House Appropriations Committee's FY 2019 budget hearings Questions for the Record (QFRs) and is reviewing the Senate Appropriations Committee's hearing transcript. OCFO expected SAC QFRs to arrive this week but those QFRs have not yet arrived.
- The HAC Full Committee mark-up of EPA's FY 2019 appropriations bill is scheduled for June 6. SAC Subcommittee and Full Committee markups are scheduled for the week of June 11.

Upcoming Major Decisions and Events:

- NPM feedback on draft materials for the FY 2018 second quarter Administrator's Performance Review were due to OCFO May 31. OCFO will consolidate and vet through the COO. The Quarterly Performance Review is scheduled for June 19 from 3-5 pm and includes all AAs and RAs.
- OPA is reviewing EPA's final draft FY 2018 second quarter Agency Priority Goal (APG) Action Plans, which address minor OMB comments. Once OPA approval is received, OCFO will provide final draft plans to OMB to meet its June 8 deadline. OMB target date for posting second quarter updates on publicly available website is June 14.

Other

- The OMB/EPA Strategic Review meeting is set for June 19 from 1-2:30 pm to discuss results of EPA senior leader assessments of progress toward the Strategic Plan, including risks to achieving strategic objectives, and management priorities focused on EPA Lean Management System deployment. OCFO is working with OMB and the Deputy Administrator's office to finalize meeting logistics. In addition to the Deputy Administrator, expected EPA participants include the COO, CFO, and AAs/DAAs (or equivalent) for OCIR, OP, OGC, OARM, and OITA.

Office of Congressional and Intergovernmental Relations

Hot Topics:

June 7 - House Energy and Commerce Committee, Subcommittee on Energy will hold a hearing on: Hydropower Licensing and Water Quality Certification under CWA 401
(Witness: John Goodin, OW) and other agencies, 11 am, 2123 Rayburn

Upcoming Major Decisions and Events:

- **June 4** – Small Communities Advisory Subcommittee will have an introductory teleconference Monday at 2pm. Ken Wagner, Senior Advisor to the Administrator for Regional and State Affairs is scheduled to speak with the newly appointed and current members.
- **June 5** – Notification of Idaho NPDES transfer of authority
- **June 6**- Quarterly Outreach meeting with Intergovernmental Associations will feature an introduction of EPA Deputy Administrator Andrew Wheeler, and an opportunity for brief engagement with the representatives of attending Intergovernmental Associations. Part II of the meeting will focus on "The Federal Strategy to Reduce Childhood Lead Exposure." Dr. Hayley Hughes, EPA National Lead Coordinator, Office of the Administrator, will provide updates, and engage in dialogue with the group.
- **June 6** – House Energy and Commerce member briefing on PFAS four-step action plan w/OW, OLEM, OCSPP, ORD
- **June 6&7** – Senator McCain, Rio Salado Federal Partners Tour, Tempe AZ
- **June 8** - US Conference of Mayors 86th Annual Meeting in Boston, MA
- **June TBD** – Senator Baldwin staff call on PFAS actions w/OW
- **June TBD** – Congressman Latta staff and HEC staff briefing on HABs in drinking water
- **June TBD**- Congressman Doyle staff briefing re: PFAS actions
- **TBD** – Cong. Peters (CA) TA re Point Loma WWTP legislation w/OW, OGC, R9
- **TBD** – Sen. Tester (MT) staff briefing on Elk River Watershed w/OW, R8
- **TBD** – Sen. Isakson (GA) staff briefing on new chemicals process w/OCSPP
- **TBD** – Approps staff briefing on PRIA fees w/OCSPP, OCFO
- **TBD** - SEPW/HEC staff briefing on TSCA first 10 chemical problem formulations w/ OSCPP

Office of Enforcement and Compliance Assurance

Hot Topics:

Construction Company Pleads Guilty for Not Following Lead Rules
On May 22, 2018, Bitner Brothers Construction, Inc. pleaded guilty in the Middle District of Pennsylvania on one count of violating TSCA and one count of Aiding and Abetting. Both Bitner Brothers Construction and owner Charles H. Bitner, Jr. will forfeit their lead certification licenses. Bitner Brothers Construction, Inc. is in the business of conducting residential and commercial renovations, repairs, and painting. Bitner Brothers did not follow required work practice standards during the replacement of windows in an apartment complex located in Harrisburg, Pennsylvania in early 2017.

Five Pennsylvania Men Charged with Conspiring to Defraud the U.S. and Violate the Clean Air Act
On May 25, 2018, Gavin Rexer, Dennis Paulhamus, Timothy Sweitzer, Joseph Powell, and John Joseph were charged with conspiring to impede the lawful functions of the EPA and DOT and to violate the Clean Air Act. Rexer, Powell, and Joseph were employees of Rockwater Northeast, a company that serviced the fracking industry. In the course of their employment, they conspired to modify the emissions systems on approximately 30 Rockwater heavy-duty diesel trucks by using "defeat devices." The defeat devices were obtained from Paulhamus and Sweitzer and their purchases were concealed in Rockwater's books and records by mislabeling them as exhaust systems. The conspirators also are accused of taking the modified commercial motor vehicles to state approved inspection stations, including Sweitzer's Garage, to pass federally regulated commercial motor vehicle inspections falsely.

Army Pays Stipulated Penalty to Resolve Violations at the Umatilla Army Depot
On May 14, 2018, the United States Army paid a stipulated penalty of $125,000 to EPA to resolve violations of the CERCLA Federal Facilities Agreement (FFA) for the Umatilla Army Depot after receiving a Congressional appropriation for the penalty. On July 14, 2016, EPA Region 10, the Army, and the Oregon Department of Environmental Quality signed a settlement agreement to resolve violations set forth in a November 2, 2015, Notice of Violation. The Army's failed to comply with several remedial action requirements contained in the Workplan for Munitions and Explosives of Concern. The settlement agreement included a new schedule and technical approach for the work remaining to be done at Umatilla along with an agreement that the Army would pay a stipulated penalty of $125,000 after it obtained Congressional authorization to pay the penalty.

Upcoming Major Decisions and Events:

On June 6, 2018, OECA AA Susan Bodine, PDAA Larry Starfield, and DAA Patrick Traylor will travel to EPA Region 7 to meet with the RA/DRA and senior enforcement managers in Region 7 to discuss enforcement and compliance priorities and issues.

On June 5, 2018, OECA DAA Patrick Traylor will join other EPA leaders in New Orleans, Louisiana to discuss hurricane preparedness for 2018, including lessons learned from recent natural disasters.

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Office of Environmental Information

Hot Topics:

E-Enterprise for the Environment Launches Be Well Informed – a State-developed Shared Service
Brief description: On June 6, private well owners in New Hampshire and Wyoming will have a new web-based tool to help them understand their well water test results. Originally built by the New Hampshire Department of Environmental Services, in collaboration with their Department of Information Technology, OEI adapted the tool to enable states, tribes, and territories to use this capability to develop their own tools for private well owners with minimal development costs.
Who benefits or cares: Private well owners in participating states, Commissioners with well water programs, and state environmental agencies who are responding to citizen inquiries regarding their well water.
Why this is important: The tool demonstrates how collaborative innovation and E-Enterprise can:

- Reduce costs to E-Enterprise partners (states, tribes and EPA).
- Provide consistent, timely, and actionable information to citizens.

Additional information:

- Massachusetts, Minnesota, Vermont and Michigan are working towards adopting the tool; other states and tribes have expressed interest.
- This work was partially supported by E-Enterprise funding provided by OCFO.
- As E-Enterprise resources allow, OEI will work with other states/tribes/territories to support this shared service.

Upcoming Major Decisions and Events:

None.

Office of General Counsel

Hot Topics:

- *Charles A. Folsom v. USACE*, No. 4:17-cv-3143 (D. Neb.). New development: On May 30, Charles Folsom, a Nebraska landowner, filed a notice of appeal to the US Court of Appeals for the Eighth Circuit challenging a decision from the US District Court for the District of Nebraska granting EPA's motion to dismiss his challenge to pre-enforcement activities by EPA and the Corps regarding the placement of fill into the Elkhorn River. EPA sent Mr. Folsom a proposed compliance order and invited him to negotiate and Mr. Folsom declined and sued EPA and the Corps to enjoin them from bringing any enforcement action. The District Court dismissed the complaint.
- *Ctr. for Envtl. Health v. Pruitt,* No. 3:18-cv-03197 (N.D. Cal). New development: On May 30, three NGOs filed a complaint against EPA and FWS for failing to comply with section 7 of the ESA with respect to the registration or reregistration of 21 pesticide products containing the active ingredient malathion. Plaintiffs assert that EPA and FWS have failed to meet their substantive duty to ensure that the malathion products do not jeopardize endangered and threatened species, and that EPA and FWS's agreement to indefinitely extend the current ESA consultation on malathion is unlawful.
- *Ctr. For Biological Diversity v. EPA,* No. 1:18-cv-1219 (D.D.C.). New development: On May 25, Plaintiff filed a FOIA lawsuit alleging that EPA has not responded to five FOIA requests and one FOIA fee waiver administrative appeal. The FOIA requests sought all communications to or from Administrator Pruitt including emails, text messages, and phone logs generally, and on a variety of topics including ethics, "sue and settle," encrypted messaging and email records management.
- *Husch Blackwell v. EPA*, No. 1:18-cv-1213 (D.D.C.). New development: On May 25, the law firm, Husch Blackwell, filed a FOIA lawsuit alleging that EPA failed to respond to a FOIA request within the statutory time frame for a request seeking certain communications involving Jess Rowland and glyphosate or Proposition 65.
- *Sanitary Bd. of the City of Charleston, W. Virginia v. Pruitt,* No. 2:16-cv-03060 (S.D.W. Va.). New development: On May 24, Plaintiff filed a notice of appeal to the US Court of Appeals for the Fourth Circuit challenging two decisions from the US District Court, prompted by EPA's disapproval of a site-specific copper criterion that was submitted by WVDEP at Plaintiff's request. Plaintiff is challenging the District Court's rulings that (1) EPA did not have a mandatory duty to approve the site-specific criterion and (2) Plaintiff lost standing to challenge the disapproval when WVDEP issued the facility a new permit, which did not impose any copper limits on its discharge.
- *Dine' Citizens Against Ruining the Env't v. EPA*, No. 18-71481 (9th Cir.). New development: On May 23, five NGOs filed a petition for writ of mandamus asking the Ninth Circuit to compel EPA Region 9 to take final action on a Clean Water Act NPDES permit renewal application for the Four Corners Power Plant located on the Navajo Nation, near Farmington, New Mexico. According to the Petition, the coal-fired power plant has been operating under an expired administratively continued permit since 2006.

Upcoming Major Decisions and Events:

6/12 Hearing on EPA's motion to stay in *Ass'n of Irritated Residents v. EPA*, a deadline suit regarding EPA's failure to take action on the San Joaquin Valley Unified Air Pollution Control District's 2016 SIP addressing nonattainment requirements for the 2008 8-Hour Ozone Standard.

Office of International and Tribal Affairs

Hot Topics:

Tijuana Spill
OITA met with the new U.S. Consulate General to Tijuana to discuss the Tijuana spill, International Boundary and Water Commission (IBWC), North American Development Bank and U.S.-Mexico Border Program. At our urging, the Consulate General has agreed to raise the Tijuana spill and funding for Tijuana infrastructure improvements with the local and national governments in Mexico. She also agreed to look into IBWC funding mechanisms and operations at the State Department.

Columbia River Treaty
The formal negotiations between the U.S. and Canada for the modernization of the Columbia River Treaty commenced this week. The U.S. negotiation team consists of the State Department, Interior/NOAA, and Bonneville Power. OITA and Region 10 met with the State Department to discuss the role of EPA and tribes in the negotiations, and State has agreed to involve EPA in the USG strategy sessions and ensure meaningful engagement with the tribes.

Upcoming Events and Decisions:

G7 Deputies Meeting
A Deputies Meeting will be held on June 1 to discuss the upcoming G7 Leaders' Summit in Charlevoix, Quebec on June 8-9, which includes Climate Change, Energy and Oceans session.

Premier of Saskatchewan
The Administrator will be meeting with the Premier of Saskatchewan, Canada, on June 6 to discuss Canada-U.S. environmental regulation.

North American Development Bank
OITA will be meeting with the North American Development Bank on June 4 to discuss current activities and upcoming Board of Directors meeting in Mexico.

Canadian Environmental Assessment Agency
The Canadian Environmental Assessment Agency will be meeting with OP and OITA on June 6/7 to discuss the EIA process, including transboundary impacts and tribal engagement.

Office of Land and Emergency Management

Hot Topics:

- **Coal Combustion Residuals (CCR)**. (see below)

- **Clean Air Act 112(r) Risk Management Program (RMP) Reconsideration NPRM.** The proposed rule was published in the FR on May 30. A public hearing is scheduled for June 14. The public comment period ends July 30, 2018.

- **Ongoing major Superfund NPL sites** (including Colorado Smelter, East Chicago, West Lake, Bonita Peak, Hudson River, Portland Harbor, Mississippi Phosphates, Oak Ridge, Edwards AFB, Berry's Creek, American Cyanamid).

- **CERCLA 108(b) Financial Assurance – Next Three Sectors**. We are working with OGC, OP, and the AO to plan our approach to the next three sectors.

- **PFOA and PFAS.**
  - Working with OCIR, OW, and others, we are preparing for a briefing on PFAS with House Energy and Commerce members.
  - We are working with ORD and OW to develop groundwater cleanup recommendations for PFOA and PFOS.
  - OLEM is working with the AO, OGC, OECA and other AAships to look at available statutory mechanisms for PFOA and PFOS to be "hazardous substances" under CERCLA.

- **Emergency Response.** Region 9 emergency response and the national Environmental Response Team are part of the inter-governmental effort addressing volcano activity in Hawaii. OAR and ORD are assisting OLEM and Region 9 with public messaging related to acute and chronic risk from exposure to volcanic gases. Current staffing is 24.

Upcoming Major Decisions and Events:

- **Definition of Solid Waste Vacatur.** This was published in the FR on May 30, 2018.

- **Coal Combustion Residuals**.
  - We plan to get the proposed rule to OMB next week and anticipate signature on June 14 to align with the approval of Oklahoma's CCR permitting program.
  - Georgia submitted its CCR permit program application to EPA. It is undergoing review.

- **E-Manifest**. We anticipate issuing a press release on June 29, 2018.

- **Hazardous Waste Pharmaceuticals Final Rule**. We will be briefing the AO and OP in early June.

- **Hazardous Substances Spill Prevention Proposed Rule**. We anticipate OMB clearance by June 8 to allow for signature by June 15.

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Office of Policy

Upcoming Major Decisions and Events:

Meeting with Canada
On June 6-7, the Office of Federal Activities will join OITA, the State Dept., and CEQ in a meeting with representatives from the Canadian government to discuss best practices for Environmental Impact Assessment and transboundary issues.

Community Assistance Announcement
In early June, the Office of Community Revitalization plans to announce six communities selected for assistance through the Healthy Places for Healthy People program, a federal initiative that works with healthcare facilities to protect the environment, improve public health, and support reinvestment in neighborhoods.

Number of Actions to OFR this Year:

- Signed by Regions:
  - Notices: 40
  - Proposed Rules: 123
  - Direct Final Rules: 8
  - Withdrawal of Proposed Rule: 1
  - Withdrawal of Direct Final: 4
  - Final Rules: 101
- Signed by HQ:
  - Notices: 204
  - Proposed Rules: 32
  - NPRM Extension: 1
  - Withdrawal of Direct Final: 1
  - Interim Final: 1
  - Final Rules: 64

Number of Actions to OFR this Week (May 25 – May 31):

- Signed by Regions:
  - Notices: 4
  - Proposed Rules: 13
  - Direct Final Rules: 0
  - Withdrawal of Proposed Rule: 0
  - Withdrawal of Direct Final: 1
  - Final Rules: 5
- Signed by HQ:
  - Notices: 11
  - Proposed Rules: 1
  - NPRM Extension: 0
  - Withdrawal of Direct Final: 0
  - Interim Final: 0
  - Final Rules: 5

Active Interagency Reviews from OMB	
Title	**OMB Due Date**
DOL/MSHA RFI: "Retrospective Study of Respirable Coal Mine Dust Rule"	05/30/2018
FAR Case 2017-014 ANPRM: "Federal Acquisition Regulations: Use of Acquisition 360 to Encourage Vendor Feedback"	06/01/2018

USDA ANPRM: "Oil and Gas Resources"	06/01/2018
USDA ANPRM: "Locatable Minerals"	06/01/2018
DOI & DOC NPRM (Pass-back): "Endangered and Threatened Wildlife and Plants; Revision of Regulations for Interagency Cooperation"	06/01/2018

Documents Submitted to OFR from May 23 - 29, 2018		
FRL	**Title**	**Date Submitted to OFR**
9978-93-Region 4	Air Plan Approval and Air Quality Designation; SC; Redesignation of the Greenville-Spartanburg Unclassifiable Area	5/29/2018
9978-92-Region 4	Air Plan Approval; South Carolina; Regional Haze Plan and Prong 4 (Visibility) for the 2012 PM2.5, 2010 NO2, 2010 SO2, and 2008 Ozone NAAQS	5/29/2018
9978-90-Region 4	Air Plan Approval and Air Quality Designation; AL; Redesignation of the Etowah County Unclassifiable Area	5/29/2018
9978-72-Region 8	Interstate Transport Prongs 1 and 2 for the 2010 Sulfur Dioxide (SO2) Standard for Colorado, Montana, North Dakota, South Dakota and Wyoming	5/29/2018
9974-26-Region 8	North Dakota Final Authorization and Incorporation by Reference of Approved State Hazardous Waste Management Program	5/29/2018
9978-73-OEI	Information Collection Request Submitted to OMB for Review and Approval; Comment Request; Plant-Incorporated Protectants; CBI Substantiation and Adverse Effects Reporting	5/29/2018
9978-77-ORD	Ambient Air Monitoring Reference and Equivalent Methods; Designation of One New Reference Method	5/29/2018
9977-72-OAR	Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards	5/29/2018
9978-94-Region 4	Approval of TN Plan for Control of Emissions from Commercial and Industrial Solid Waste Incineration Units	5/25/2018
9978-87-Region 5	Air Plan Approval; Ohio; Cleveland, PM2.5 Attainment Plan	5/25/2018
9978-86-OAR	Proposed Information Collection Request; Comment Request on Two Proposed Information Collection Requests	5/25/2018
9978-80-Region 7	Delegation of Authority to the States of Iowa; Kansas; Missouri; Nebraska; Lincoln-Lancaster County, NE; and City of Omaha, NE, for New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP) Including Maximum Achievable Control Technology (MACT) Standards	5/25/2018
9978-56-Region 3	Approval and Promulgation of Air Quality Implementation Plans; Maryland; Continuous Opacity Monitoring Requirements for Municipal Waste Combustors	5/25/2018
9977-76-OCSPP	Pesticide Emergency Exemptions; Agency Decisions and State and Federal Agency Crisis Declarations	5/25/2018
9977-62-OCSPP	Defensin Proteins Derived from Spinach in Citrus Plants; Temporary Exemption from the Requirement of a Tolerance	5/25/2018
9976-99-OCSPP	Product Cancellation Order for Certain Pesticide Registrations and Amendments to Terminate Uses	5/25/2018
9978-74-Region 4	Public Water System Supervision Program Revision for the Commonwealth of Kentucky	5/25/2018

9978-82-Region 9	Air Quality State Implementation Plans: Arizona; Approval and Conditional Approval of State Implementation Plan Revisions; Maricopa County Air Quality Department; Stationary Source Permits	5/25/2018
9977-80-Region 8	National Oil and Hazardous Substances Pollution Contingency Plan; National Priorities List: Deletion of the Davenport and Flagstaff Smelters Superfund Site	5/25/2018
9978-81-Region 9	Approval and Promulgation of Air Quality Implementation Plans; Nevada; Rescission of Regional Haze Federal Implementation Plan for the Reid Gardner Generating Station	5/25/2018
9978-79-Region 7	Approval of Nebraska Air Quality Implementation Plans; Title 129, Chapter 20, Particulate Emissions; Limitations and Standards	5/24/2018
9978-78-Region 7	Approval of Missouri Air Quality Implementation Plans; Infrastructure SIP Requirements for the 2012 Annual Fine Particulate Matter (PM2.5) National Ambient Air Quality Standard Interstate Transport	5/24/2018
9978-27-Region 1	Air Plan Approval; New Hampshire; Nonattainment Plan for the Central New Hampshire Sulfur Dioxide Nonattainment Area	5/24/2018
9978-26-Region 1	Air Plan Approval; Connecticut; Volatile Organic Compound Emissions from Consumer Products and Architectural and Industrial Maintenance Coatings	5/24/2018
9977-56-OLEM	Response to Vacatur of Certain Provisions of the Definition of Solid Waste Rule	5/24/2018
9978-49-OECA	Proposed Information Collection Request; Comment Request; See Item Specific ICR Titles Provided in the Text	5/24/2018
9974-81-OEI	NESHAP for Beryllium Rocket Motor Fuel Firing (Renewal)/ICR No.1125.0	5/24/2018
9975-90-OEI	NSPS for Glass Manufacturing Plants (Renewal)/ICR No.1131.12	5/24/2018
9978-66-Region 5	Adequacy Status of the Indiana Portion of the Chicago-Naperville, IL-IN-WI Area for the Submitted 2008 Ozone Standard Fifteen Percent Rate of Progress Plan for Transportation Conformity Purposes	5/24/2018
9978-61-Region 5	Air Plan Approval; Michigan; Regional Haze Progress Report	5/23/2018
9978-59-Region 4	Air Plan Approval and Air Quality Designation; KY; Redesignation of the Kentucky Portion of the Louisville Unclassifiable Area	5/23/2018
9978-57-Region 3	Approval and Promulgation of Air Quality Implementation Plans; Virginia; Emissions Statement Rule Certification for the 2008 Ozone National Ambient Air Quality Standard	5/23/2018
9978-18-Region 9	Approval of California Air Plan Revisions; Butte County Air Quality Management District; Stationary Source Permits	5/23/2018
9976-24-OCSPP	Agency Information Collection Activities; Proposed Renewal of Several Currently Approved Collections (EPA ICR Nos. 2491.04 and 2475.03); Comment Request	5/23/2018
9978-69-OEI	EPA's In-Use Vehicle and Engine Testing Programs, ICR No. 0222.11	5/23/2018
9978-68-OEI	NESHAP for Group I Polymers and Resins (Renewal)" ICR No. 2410.04	5/23/2018
9978-60-OEI	NESHAP for Pharmaceuticals Production (Renewal)/ICR No. 1781.08	5/23/2018

9976-72-Region 6	Clean Air Act Operating Permit Program; Petitions for Objection to State Operating Permit for ExxonMobil Corporation, ExxonMobil Baytown Refinery, Harris County, Texas	5/23/2018
9978-58-ORD	EPA Board of Scientific Counselors Notice of Charter Renewal	5/23/2018
9978-53-OLEM	Agency Information Collection Activities; Proposed Collection; Comment Request; Continuous Release Reporting Regulations (CRRR) under CERCLA 1980 (Renewal); EPA ICR No. 1445.13, OMB Control No. 2050-0086	5/23/2018
9978-54-OW	Extension of the Application Deadline Date for Credit Assistance under the Water Infrastructure Finance and Innovation Act (WIFIA) Program	5/23/2018
9978-75-Region 10	Air Plan Approval; Washington; Regional Haze Progress Report	5/23/2018

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Office of Research and Development

Hot Topics:

***Fentanyl Fact Sheet* for On-Scene Coordinators**
Nearly half (over 19,000) of the opioid-related deaths in the U.S. in 2016 involved fentanyl. EPA and state-level responders have emphasized the lack of comprehensive information on the detection, sampling, analysis and decontamination for the fentanyl class of synthetic opioid chemical compounds. ORD partnered with Office of Emergency Management's CBRN Consequence Advisory Division and Environmental Response Team, Region 5, and others to develop *the Fentanyl Fact Sheet*. It is living document that compiles current, publicly-available information for use by EPA OSCs, and may also be useful to local/state first responders such as EMT, hazmat, and law enforcement. ORD's research underway on fentanyl sampling methods and decontamination will strengthen the fact sheet over time.

Technical support on Tularemia to the Kentucky Department of Public Health
ORD is supporting the Kentucky Department of Public Health in their response to a tularemia outbreak in Butler County, Kentucky. The causative agent of tularemia, *Francisella tularensis*, is classified as a Tier 1 Select Agent by the U.S. government due to its low infectious dose, ease of spread by aerosol, and high virulence. This outbreak has affected cottontail rabbits, Beagle handlers, and Beagle dogs residing in a 240-acre beagle field trial ground. Humans can be infected with the organism by contact with infected animals or vectors. To better understand the cause of the outbreak, ORD is guiding Kentucky Department of Public Health on sampling and analysis of *Francisella tularensis* in environmental samples, and providing advice on collection and stabilization of water samples and possible causes of the outbreak.

IRIS Assessment Released for Review
On May 30th, the draft assessment for hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) was released for post-peer review Interagency and Agency review.

Upcoming Major Decisions and Events:

We look forward to hosting OCSPP leadership in RTP on June 8 where we will discuss ORD data, methods, and tools being developed to support TSCA prioritization. On June 5th ORD staff will kick off summer with an evening of baseball at National's Park.

Science Advisory Board Meeting
On June 1st, ORD will provide an update on IRIS at the Science Advisory Board meeting. ORD will also present an overview of lead science that highlights seven success stories. Other participants and presenters include the Office of the Administrator on the Federal Lead Strategy, Office of Water, Office of Land and Emergency Management, and Office of Chemical Safety and Pollution Prevention.

Office of Water

Hot Topics:

Georgia Nonpoint Source Pollution Control Program
Today, Dave Ross co-signed a joint EPA/NOAA Federal Register Notice announcing the agencies' intent to fully approve the Georgia Coastal Nonpoint Pollution Control Program. The notice invites public comment on the agencies' proposed finding that Georgia has satisfied all conditions on the 2002 approval of the State's coastal nonpoint pollution control program. The Coastal Zone Act Reauthorization Amendments directs states and territories with coastal zone management programs previously approved under Section 306 of the Coastal Zone Management Act to develop and implement coastal nonpoint programs, which must be submitted to the federal agencies for approval. The notice will be sent to NOAA next for signature. Once published, the notice will open a 30-day public comment period.

WIFIA
As part of OW's enhanced outreach strategy to promote the 2018 Notice of Funding Availability (NOFA) opportunity, this week, the WIFIA program hosted the WIFIA Letter of Interest Submission and Selection Process Question and Answer Session. More than 70 people participated in the event. The next webinar, scheduled for June 4, will provide an overview of the WIFIA program and the 2018 selection round. In addition, OW, working with OPA, provided the regional public affairs directors with a "pitch" packet to use with local media outlets as well as key messages to fold into senior leadership speeches. Tomorrow, the WIFIA staff will present at the New England Environmental Business Council Infrastructure Workshop: Update and Overview of WIFIA Water Infrastructure Loan Program.

Environmental Financial Advisory Board (EFAB) Membership Package
This week, the EFAB's 2018 Official Membership Package was approved and is moving forward for the Administrator's signature. The package includes a new recommended chair, 4 new EFAB member appointments, and 3 departures. The term for appointees will run for a period of two years beginning June 15.

Waterkeeper II Steam Electric FOIA
This week, OW provided the May interim release for this FOIA to the requestor. The EPA was under court order to complete this FOIA by May 31st, however, the court granted an extension of that deadline to June 21, 2018.

Upcoming Major Decisions and Events:

HEC Hearing
Next week, John Goodin, Acting Director for the Office of Wetlands, Oceans and Watersheds, will testify before the House Committee on Energy and Commerce (HEC), Energy Subcommittee. He will testify to the EPA's role on the CWA section 401 state delegated authority and water quality certification process in relation to the non-federal hydropower licensing process. The panel is comprised of officials from FERC, NOAA, FWS, and USACE. The hearing is open to press.

EPA-National Tribal Water Council Meeting
Next week, Benita Best Wong will provide the opening remarks for the Council meeting and discuss with members' water issues in Indian country. This meeting is closed to press.

Public Meeting on Unregulated Contaminants in Drinking Water
Next week, the EPA will host an all-day public meeting and webinar at EPA-Cincinnati. Approximately 300 participants have registered for the meeting which will include presentations from the Technical Support Center in Cincinnati and ORD on the EPA drinking water method development and include discussion with stakeholders on innovative analytical testing procedures for unregulated contaminants.

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TSCA RISK EVALUATION FOR ASBESTOS

TALKING POINTS:

- On December 19, 2016, EPA designated Asbestos as one of the first 10 chemical substances for which EPA is conducting a risk evaluation as required by the Toxic Substances Control Act (TSCA) to determine whether the chemical substances present an unreasonable risk of injury to health or the environment.
- Upon initiating the risk evaluation process for Asbestos, EPA began work to prepare the scope of the risk evaluation to be conducted. The scope of the risk evaluation must include the hazards, exposures, conditions of use, and the potentially exposed or susceptible subpopulations the Administrator expects to consider.
- TSCA Section 6(b)(4)(D) required the EPA to publish the scope of the risk evaluation for Asbestos within six months after the initiation (by June 19, 2017); EPA has met this statutory deadline.
- The Agency published a problem formulation for asbestos in June 2018. This document further refined the conditions of use the Agency intends to cover in the risk evaluation.
- EPA's focus is on asbestos currently being manufactured, imported, processed or distributed in the US.
- June 2018, EPA proposed a Significant New Use Rule for certain uses of asbestos (including asbestos-containing goods) that would require manufacturers and importers to receive EPA approval before starting or resuming manufacturing, and importing or processing, new uses of asbestos. Under this review process, EPA will evaluate the conditions of use of asbestos and, when necessary, take action to prohibit or limit the use.
- Many existing Federal and State regulations address asbestos exposure from legacy uses.

BACKGROUND:

- Asbestos is a substance of concern being addressed at both the state and federal level. Existing federal (EPA, OSHA, CDC) requirements help ensure proper management and safe disposal of asbestos-containing building material.
- Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations specify work practices for asbestos during demolition and renovation of certain structures, installations, and buildings. These work practice standards are designed to minimize the release of asbestos fibers during building demolition or renovation, waste packaging, transportation and disposal.
- Asbestos Hazard Emergency Response Act (AHERA) (TSCA Title II) prevents or reduces asbestos hazards in school buildings.
- Occupational Safety and Health Administration (OSHA) prevents or reduces asbestos exposure in the workplace.
- The Clean Air Act Nation Emission Standards for Hazardous Air Pollutants (NESHAPs) also has working protect requirements.
- Additional state and local regulations extend beyond the federal requirements to address asbestos in buildings.
- Generally, TSCA does not give EPA the authority to regulate the non-commercial use of items already within a home. EPA has extensive guidance for homeowners that gives them

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the tools and information they need to protect themselves and is available on EPA's webpage under asbestos.

- Accomplishments. EPA has initiated the risk evaluation process for Asbestos, including the preparation of the scope and problem formulation of the risk evaluation that includes the hazards, exposures, conditions of use, and the potentially exposed or susceptible subpopulations the Administrator expects to consider.
- Congressional Inquiries. Senators Boxer, Durbin, Feinstein, and Tester wrote in support of including asbestos on the initial list.

ISSUE:

- Legacy Uses: EPA has received criticisms regarding exclusion of 'legacy' uses during evaluation of existing chemicals. Asbestos is an example where this concern arises.
  - Many legacy uses are asbestos materials found in homes, however, TSCA generally does not give EPA the authority to regulate the non-commercial use of items already within a home.
    - EPA has extensive guidance for homeowners to provide tools and information to protect themselves: [HYPERLINK "https://www.epa.gov/asbestos/protect-your-family"]
  - Existing federal and state regulations address asbestos exposure from legacy uses in all buildings with more than four dwelling units.
  - EPA's actions on asbestos will *prevent future legacy* issues with asbestos by promulgating a Significant New Use Rule (SNUR) to ensure that no new uses are initiated without EPA's review.
  - EPA believes TSCA is best suited to address uses for which a chemical is currently being manufactured, processed, or distributed, and will conduct a risk evaluation focusing on asbestos currently being manufactured, imported, processed or distributed.

Message

From: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
Sent: 12/11/2018 11:16:29 PM
To: Hanley, Mary [Hanley.Mary@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Tyree, JamesN [tyree.jamesn@epa.gov]
Subject: RE: Asbestos Petition RL for OCSPP IO Review
Attachments: Comments_Asbestos TSCA Section 21 Petition FR Document 12-11-2018 RL.docx

Few small comments. Thanks.
Charlotte

From: Hanley, Mary
Sent: Tuesday, December 11, 2018 5:35 PM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Tyree, JamesN <tyree.jamesn@epa.gov>
Subject: FW: Asbestos Petition RL for OCSPP IO Review
Importance: High

Attached for OCSPP IO review is a revised version of the asbestos CDR-related sec 21 petition response FRN redlined to show changes. The clean version has been provided to Peter for the workgroup review

---

From: Blunck, Christopher
Sent: Tuesday, December 11, 2018 3:50 PM
To: Hanley, Mary <Hanley.Mary@epa.gov>
Cc: Hartman, Mark <Hartman.Mark@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Blair, Susanna <Blair.Susanna@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>; Vendinello, Lynn <Vendinello.Lynn@epa.gov>
Subject: FW: Asbestos Petition RL for OCSPP IO Review
Importance: High

Mary -- Attached for OCSPP IO review is a revised version of the asbestos CDR-related sec 21 petition response FRN redlined to show changes after consideration of OCSPP IO comments. Per discussion this morning, a clean version of the attached has been sent to Peter Smith for transmittal to FAR (or a "FAR-like" process).

Please let us know if you have questions –

Thanks!

Chris Blunck
Special Assistant/Policy Advisor
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Phone: 202-564-8078
Fax: 202-564-0575

Please do not print this email unless absolutely necessary

WARNING - Do not e-mail any Confidential Business Information (CBI) to EPA

Message

From: Jackson, Ryan [jackson.ryan@epa.gov]
Sent: 8/8/2018 6:36:08 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Hewitt, James [hewitt.james@epa.gov]; Abboud, Michael [abboud.michael@epa.gov]; Beach, Christopher [beach.christopher@epa.gov]
Subject: Asbestos Fact Sheet_FINAL.2.docx
Attachments: Asbestos Fact Sheet_FINAL.2.docx

Importance: High

How's this?

Message

From: Pritchard, Eileen [Pritchard.Eileen@epa.gov]
Sent: 4/26/2019 11:40:02 AM
Subject: Administrators Weekly Report for week ending April 26, 2019
Attachments: Administrators Weekly Report 04.25.2019.pdf; Administrators Weekly Report 04.25.2019.docx

Good Morning, Administrator Wheeler and Colleagues,

Please see the attached report for the **Administrators Weekly Report,** which includes program offices and regional updates for the week ending April 26, 2019.

Have a nice weekend!

Eileen Pritchard
Special Assistant: Office of the Administrator
(202) 564-6578 (d)
pritchard.eileen@epa.gov

Message

From: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Sent: 8/8/2018 5:39:47 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Strauss, Linda [Strauss.Linda@epa.gov]
Subject: Asbestos web revisions needed today/ASAP
Attachments: Asbestos Web Edits New Use.docx

Flag: Flag for follow up

Just flagging this for you. The edits are consistent with the final language you worked on earlier. OPA would like web edits up ASAP. Nancy Grantham in OPA had me post the final asbestos factsheet on the web a few minutes ago. Thanks.

From: Dunton, Cheryl
Sent: Wednesday, August 08, 2018 11:34 AM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>
Cc: Strauss, Linda <Strauss.Linda@epa.gov>
Subject: Asbestos web revisions

Here's what we're thinking on web revisions. See track changes of the pages in question attached. This language is pulled from the factsheet language OPA pulled together so if that changes I'll change this too. Let me know if you have thoughts. Thanks.

Cheryl Dunton
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
202-564-4893

Message

From: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
Sent: 1/3/2019 5:30:11 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: edits_OCSPP-6 CLEAN Asbestos.docx
Attachments: edits_OCSPP-6 CLEAN Asbestos.docx

Asbestos edit.

Message

From: Lynn L. Bergeson [lbergeson@lawbc.com]
Sent: 6/25/2018 2:21:05 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]
Subject: webinar
Attachments: 00245239.PPTX

Nancy,

We DELETED the question noted below.

To: Lynn L. Bergeson; Heidi Brown Lewis
Subject: FW: webinar

Slide 20 changed.

Removed one of the questions to EPA (Does EPA have recommendations for maintaining import production volumes in circumstances in which product is not restricted in Europe?). Lynn – you may wish to tell Dr. Beck, assuming BNA has not sent slides yet.

KATHLEEN M. ROBERTS
VICE PRESIDENT, B&C® CONSORTIA MANAGEMENT, L.L.C.
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BERGESON & CAMPBELL PC

2018 Bloomberg BNA/ Bergeson & Campbell, P.C. Chemical Policy Summit Series

TSCA at 2: An Update on Implementation and Hot Topics

June 25, 2018

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Program

Opening -- **Lynn L. Bergeson**
Managing Partner
Bergeson & Campbell, P.C.

Agency Update -- **Nancy B. Beck, Ph.D., DABT®**
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency

Key Section 5 Concerns -- **Misty L. Bogle**
Global Product Stewardship Manager
Vertellus

Key Section 5 Concerns -- **Michael Gould**
EH&S Committee Chairman
RadTech North America

Questions

Close

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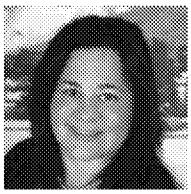

Nancy B. Beck, Ph.D., DABT®
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency

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EPA Office of Chemical Safety & Pollution Prevention (OCSPP) Accomplishments and Priorities under TSCA

Nancy B. Beck, PhD, DABT
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
June 25, 2018
beck.nancy@epa.gov

Toxic Substances Control Act (TSCA) Year 2 Accomplishments

- Addressing Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
- Dust-Lead Hazard Standards
- Final Mercury Reporting Rule
- Transparency and Confidential Business Information (CBI)
  - Unique Identifier
  - Generic Name Guidance
  - Expanded Access to CBI Guidance
- Alternative Strategy to Reduce Animal Testing

TSCA Year 2 Accomplishments

- New Chemicals Points to Consider
- Ten Problem Formulations
- Asbestos Significant New Use Rule (SNUR)
- Systematic Review Approach
- Proposed Fees Rule

Near-Term Priorities

- Methylene Chloride Final Rule
- Establishing a Fee Program
- Updating TSCA Chemical Substance Inventory
  - CBI Review Plan Rule
- Completing First Ten Chemicals Risk Evaluations
- Selecting the Next 40 Chemicals for Prioritization
- Addressing PBTs
- Refining New Chemicals Review

Misty L. Bogle
Global Product Stewardship Manager
Vertellus

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Conditions of Use (COU)

- **Section 3 Definition:** "… the circumstances, as determined by [EPA], under which a chemical is intended, known, or reasonably foreseen to be manufactured, processed…"
- The Office of Pollution Prevention and Toxics (OPPT) considered COU in the past, including foreseeable COU, and would impose restrictions (*e.g.*, use limitations, water release limitations) to protect against those foreseen COU

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Key Concerns

- If the U.S. Environmental Protection Agency (EPA) identifies a COU in which hazard is not low for health and for ecotoxicity ("low/low" cases), EPA is proposing regulation in nearly all cases
  - Basis: "somebody might" exceed the level of concern
  - Any conceivable *vs.* reasonably foreseeable

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Key Concerns

- If EPA determines it is required to regulate under Section 5(f) or Section 5(e), it must do so "to the extent necessary" to protect against unreasonable risk
  - What is "the extent necessary"?
- Example for consideration:
  - An employer requires workers to wear gloves and gloves are provided to all workers
  - If EPA believes that a worker may choose not to wear the required gloves, is that a foreseeable COU and reasonable basis for a SNUR? Does adding a TSCA regulation in addition to the existing Occupational Safety and Health Administration (OSHA) regulation meet the "extent necessary" provision?

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Key Concerns

- Notable outcomes
  - EPA requiring workplace protection duplicative to OSHA requirements
  - Very difficult to “test out” of restrictions -- absent testing to demonstrate low hazard, EPA imposes regulation

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Case Study

BACKGROUND

- Stereoisomer -- non-specific analog already on TSCA Inventory
- Ester -- no releases to water, worker protections included
- Low Volume Exemption (LVE) granted -- no unreasonable risk
- Premanufacture Notification (PMN) application in June 2017
- Added aquatic test data
- Same controls in place
- PMN conditions – "not likely to present unreasonable risk"
- Concern about changes to COU -> non-5(e) SNUR

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Questions for EPA

- Will we see additional guidance on the Agency's interpretation of "reasonably foreseen" circumstances in new chemical review?
- Can industry expect to be regulated in every case, unless our substance is completely non-hazardous?
- When will the backlog of non-5(e) SNURs be resolved?
- Feedback on issues of concern related to COU
- Could/should EPA revisit the option to consider relative risk?
  - Because EPA no longer considers relative risk in new chemical review, less hazardous new chemicals are more highly regulated than more hazardous existing chemicals

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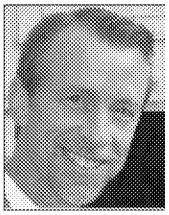

Michael Gould
EH&S Committee Chairman
RadTech North America

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Business Concerns with SNURs

- Consent order or non-order SNUR trigger
  - Section 12(b) export notification if substance present at >1 percent
  - Supply chain communication to all recipients
  - Recordkeeping requirements apply to all levels of supply chain
  - Lower reporting thresholds for Chemical Data Reporting (CDR)
- Some companies prohibit purchasing a substance with a SNUR due to a perception of enhanced risk

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Current Forecast on SNURS

- Many more SNURs in our future
  - Recent analysis shows:
    - About 5 percent of initial determinations are not likely
    - 11.5 percent of final determinations are not likely
    - Is this trend reversible?
- Necessity of SNURs
  - Role of workplace standards
  - Is EPA coordinating with OSHA?

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Case Study

BACKGROUND

- Pre-amended TSCA, PMN filed for substance regulated under LVE
  - Substance is low molecular weight polymer of a discreet chemical substance with known toxicity concerns
- PMN initially dropped, but pulled back into re-evaluation after amended TSCA passed

CURRENT STATUS

- Conclusion of re-evaluation under amended TSCA included certain restrictions
  - Including concentration limitation for imported products
  - Concentration limitation makes it impossible for manufacturer to import raw material
- Re-evaluation also focuses on toxicity of parent compounds versus final product

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Question for EPA

- Does EPA evaluation take into account the fact that by making the discreet substance into a polymer, the substance has less exposure potential?
  - Less accessible at the cellular level
  - More secure in final cured articles

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Related SNUR Issues

- Significant delays, especially in SNUR publication
  - Order SNURs -- no reason to delay; required by statute, restrictions established in consent order
  - Non-order SNURs -- authority has been questioned
- Section 5(e) SNURs must be prompt
- Fish or cut bait on non-order SNURs
- Creative solutions when hazards can be addressed by limiting how substance is manufactured
  - Proposal to create new Inventory flag for chemicals with workplace exposure concerns
- Example for consideration: The EPA conservative model predicts exposure a level order of magnitude below a chemical's concentration of concern (COC)
  - Is it foreseeable that COC could be exceeded?
  - Is this a reasonable basis for a SNUR?

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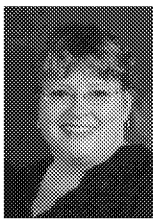
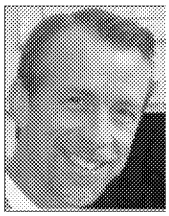
Questions

Nancy B. Beck, Ph.D., DABT®
Deputy Assistant Administrator
Office of Chemical Safety and
Pollution Prevention
EPA

Lynn L. Bergeson
Managing Partner
Bergeson & Campbell, P.C..



Misty L. Bogle
Global Product
Stewardship Manager
Vertellus



Michael Gould
EH&S Committee Chairman
RadTech North America

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Thank You

Lynn L. Bergeson
BERGESON & CAMPBELL, P.C.
2200 Pennsylvania Avenue, N.W.
Suite 100W
Washington, D.C. 20037
lbergeson@lawbc.com
www.lawbc.com
http://www.tscablog.com/

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Message

From: Kaczmarek, Chris [Kaczmarek.Chris@epa.gov]
Sent: 4/24/2019 9:19:32 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
CC: Lis-Coghlan, Kamila [lis-coghlan.kamila@epa.gov]; Schwab, Justin [Schwab.Justin@epa.gov]; Lloyd, Tyler [Lloyd.Tyler@epa.gov]; Cole, Joseph E. [cole.josephe@epa.gov]; Wilber, Eric [Wilber.Eric@epa.gov]; Gsell, Alyssa [Gsell.Alyssa@epa.gov]
Subject: RE: Asbestos Petition FRN for OSCPP IO Final Review
Attachments: Asbestos Petition FRN 2019-4-23_OGC_ptslo review.docx

Thank you for the additional review opportunity. Eric, Alyssa and I have embedded in the attached version a few additional comments and suggested edits, the most prominent of which are found on pp. 18 and 21. I am cc'ing Kamila and Justin on this email in order to make them aware of our comments/edits on those pages in particular. If there are any questions, please contact Eric, Alyssa, or me. Chris!

Chris E. Kaczmarek
Assistant General Counsel
Pesticide and Toxic Substance Law Office
Office of General Counsel
U.S. EPA
Tel (202) 564-3909

From: Dunn, Alexandra
Sent: Wednesday, April 24, 2019 10:37 AM
To: Kaczmarek, Chris <Kaczmarek.Chris@epa.gov>; Lis-Coghlan, Kamila <lis-coghlan.kamila@epa.gov>; Schwab, Justin <Schwab.Justin@epa.gov>
Subject: Fwd: Asbestos Petition FRN for OSCPP IO Final Review

Alexandra Dapolito Dunn, Esq.
Assistant Administrator
Office of Chemical Safety & Pollution Prevention
U.S. Environmental Protection Agency
Washington, DC

Sent from my iPhone

Begin forwarded message:

From: "Hanley, Mary" <Hanley.Mary@epa.gov>
Date: April 24, 2019 at 10:31:56 AM EDT
To: "Dunn, Alexandra" <dunn.alexandra@epa.gov>, "Beck, Nancy" <Beck.Nancy@epa.gov>, "Bertrand, Charlotte" <Bertrand.Charlotte@epa.gov>, "Baptist, Erik" <Baptist.Erik@epa.gov>
Cc: "Tyler, Tom" <Tyler.Tom@epa.gov>, "Tyree, JamesN" <tyree.jamesn@epa.gov>
Subject: FW: Asbestos Petition FRN for OSCPP IO Final Review

I noticed that Hans did not send this to everyone so I am forwarding. This is the revised section 21 petition in redline reflecting edits made in response to our IO and Justin. Please advise of any further revisions, etc. Thanks.

From: Scheifele, Hans
Sent: Tuesday, April 23, 2019 4:57 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>
Cc: Smith, Peterj <Smith.Peterj@epa.gov>; Richmond, Jonah <Richmond.Jonah@epa.gov>; Hanley, Mary <Hanley.Mary@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>; Schmit, Ryan <schmit.ryan@epa.gov>
Subject: Asbestos Petition FRN for OSCPP IO Final Review
Importance: High

Attached for review in track changes is the revised section 21 petition response FRN. This version includes track changes to show incorporation of OCSPP IO and Justin Schuab's comments.

We are finalizing other package materials including the action memo, comms strategy and letter to petitioners that we will share soon. Please let us know if any questions.

Thanks,
Hans

Hans Scheifele
Special Assistant
Office of Pollution Prevention and Toxics
William Jefferson Clinton Building - East, MC7401M
Washington DC 20460
202.564.3122 (office) | Scheifele.hans@epa.gov

Message

From: Chun, Melissa [Chun.Melissa@epa.gov]
Sent: 6/1/2018 1:03:55 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Strauss, Linda [Strauss.Linda@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Subject: Fwd: Typeset FR Documents Ready for Signature Package (18T-0126; FRL-9978-76)
Attachments: 18T-0126 rev2 (002).docx; ATT00001.htm; PrepublicationNotice_Asbestos-SNUR_2_NPRM_2018-05-31.pdf; ATT00002.htm; PrepublicationNotice_Asbestos-SNUR_NPRM_2018-05-31.docx; ATT00003.htm

Sent from my iPhone

Begin forwarded message:

From: "Chun, Melissa" <Chun.Melissa@epa.gov>
To: "Pierce, Alison" <Pierce.Alison@epa.gov>
Cc: "Blunck, Christopher" <Blunck.Chris@epa.gov>, "Courtnage, Robert" <Courtnage.Robert@EPA.GOV>, "Hartman, Mark" <Hartman.Mark@epa.gov>
Subject: FW: Typeset FR Documents Ready for Signature Package (18T-0126; FRL-9978-76)

Here's the prepub.

I've also attached the FR Notice, pre-pub notice, and signature page in case you need to make changes.

-Melissa

Melissa L Chun | US EPA | Regulatory Coordination Staff | Office of Chemical Safety and Pollution Prevention | 1200 Pennsylvania Ave., NW | William Jefferson Clinton Building East Room 3425E, Mail Code 7101M | Washington DC 20460 | phone: (202) 564-1605

From: Blunck, Christopher
Sent: Thursday, May 31, 2018 5:34 PM
To: Courtnage, Robert <Courtnage.Robert@EPA.GOV>; Travers, Mary-F <travers.mary-f@epa.gov>; OCSPP-RCS <OCSPP-RCS@epa.gov>
Cc: Hofmann, Angela <Hofmann.Angela@epa.gov>; Lanier, Minnie <Lanier.Minnie@epa.gov>; Artis, Sandra-S <artis.sandra-s@epa.gov>; Pastor, Justo <Pastor.Justo@epa.gov>; Green, Teresa <Green.Teresa@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Chun, Melissa <Chun.Melissa@epa.gov>; Carmichael, Lea <Carmichael.Lea@epa.gov>; Winchester, Erik <Winchester.Erik@epa.gov>; Anderson, Steve <Anderson.Steve@epa.gov>
Subject: RE: Typeset FR Documents Ready for Signature Package (18T-0126; FRL-9978-76)

In the attached on pp 27 and 28 I have changed the date of posting form May 31, 2018 to June 1, 2018 as it is not posting today and it is expected to post tomorrow a.m..

Chris Blunck
Special Assistant/Policy Advisor
Office of Pollution Prevention and Toxics

U.S. Environmental Protection Agency
Phone: 202-564-8078
Fax: 202-564-0575

From: Courtnage, Robert
Sent: Thursday, May 31, 2018 1:46 PM
To: Travers, Mary-F <travers.mary-f@epa.gov>; OCSPP-RCS <OCSPP-RCS@epa.gov>
Cc: Hofmann, Angela <Hofmann.Angela@epa.gov>; Lanier, Minnie <Lanier.Minnie@epa.gov>; Artis, Sandra-S <artis.sandra-s@epa.gov>; Pastor, Justo <Pastor.Justo@epa.gov>; Green, Teresa <Green.Teresa@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Chun, Melissa <Chun.Melissa@epa.gov>; Carmichael, Lea <Carmichael.Lea@epa.gov>; Blunck, Christopher <Blunck.Chris@epa.gov>; Winchester, Erik <Winchester.Erik@epa.gov>; Anderson, Steve <Anderson.Steve@epa.gov>
Subject: RE: Typeset FR Documents Ready for Signature Package (18T-0126; FRL-9978-76)
Importance: High

Please find a revised electronic version with a sentence removed on p. 23 as per an IO edit. Chris is now getting this signed.

Robert T. Courtnage
Associate Chief
Fibers and Organics Branch
National Program Chemicals Division
Office of Pollution Prevention and Toxics/OCSPP
U.S. Environmental Protection Agency
202.566.1081 (Desk)
202.740.2993 (Mobile)

From: Courtnage, Robert
Sent: Thursday, May 31, 2018 9:19 AM
To: Travers, Mary-F <travers.mary-f@epa.gov>; OCSPP-RCS <OCSPP-RCS@epa.gov>
Cc: Hofmann, Angela <Hofmann.Angela@epa.gov>; Lanier, Minnie <Lanier.Minnie@epa.gov>; Artis, Sandra-S <artis.sandra-s@epa.gov>; Pastor, Justo <Pastor.Justo@epa.gov>; Green, Teresa <Green.Teresa@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Chun, Melissa <Chun.Melissa@epa.gov>; Carmichael, Lea <carmichael.lea@epa.gov>; Blunck, Christopher <Blunck.Chris@epa.gov>
Subject: RE: Typeset FR Documents Ready for Signature Package (18T-0126; FRL-9978-76)
Importance: High

Mary,

Please find the FRN version with the posting date (today) inserted. It is in TNR 12-pt. We will now assemble the hard-copy signature package for routing following your instructions below.

Thanks!

Robert T. Courtnage
Associate Chief
Fibers and Organics Branch
National Program Chemicals Division

Office of Pollution Prevention and Toxics/OCSPP
U.S. Environmental Protection Agency
202.566.1081 (Desk)
202.740.2993 (Mobile)

From: Travers, Mary-F
Sent: Wednesday, May 30, 2018 9:24 PM
To: Courtnage, Robert <Courtnage.Robert@EPA.GOV>; Carmichael, Lea <Carmichael.Lea@epa.gov>; Blunck, Christopher <Blunck.Chris@epa.gov>
Cc: Hofmann, Angela <Hofmann.Angela@epa.gov>; Lanier, Minnie <Lanier.Minnie@epa.gov>; Artis, Sandra-S <artis.sandra-s@epa.gov>; Pastor, Justo <Pastor.Justo@epa.gov>; Green, Teresa <Green.Teresa@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Chun, Melissa <Chun.Melissa@epa.gov>
Subject: Typeset FR Documents Ready for Signature Package (18T-0126; FRL-9978-76)

Robert,

I have completed my review. Attached are the typeset FR documents for your signature packages. (remember to include on pages 27 and 28 the web posting dates)

Please READ and follow the instructions in this Email to avoid delays and complications.

Do NOT forget to return the edited electronic word copy to us and put the package in the RCS BOX!!!!!!!!!

What am I providing you?

1) **FR Document – The final signature ready copy in Word.**

<u>Important Note:</u>
You must print a SINGLE-SIDED copy of the FR documents to use as the original for inclusion in the signature package that will be given to the official who must sign the FR document. The Office of the Federal Register (OFR) requires the original signature to be on a single-sided FR document. If the original signature is on a double-sided document, the OFR will NOT accept it and you will have to get your manager to sign a single-sided version. The other documents can be double sided. Email your version to Me, Angela Hofmann, Justo Pastor, and Sandra Artis BEFORE you get

the document signed. This way the paper and electronic version match.

Process for Correcting the FR Document:

I've attached the word version, in the event of needed changes. Email the corrected version BEFORE you get the document signed. That way paper and electronic version match. Also, when you print your document for signature, please make sure it's in Times New Roman, 12 pt. and single sided. Make sure the signature page is on a separate page.

2) **Concurrence Sheet - Include this sheet in your signature package to document the reviewer's concurrences for your records. You do NOT need to return this to us – it is for YOUR records.**

3) **Typesetting Request Form –**

   PLEASE make sure when you fill out the typesetting request form, in the large empty block, in the left top corner, you insert, my initials (MT) and 18T-0126.

   Follow the attached guidance document that was sent on June 16, 2015 that provides detailed instructions for staff and managers in OCSPP that must obtain the required publication funding commitment for an FR document. In addition to explaining how the form should be completed, this guidance document describes the typical process used to get the necessary funding commitment. As of May 1, 2018 the Typesetting Request Cost information has been updated and the new information has been included along with a Typesetting Request Form.

   Remember that you MUST complete the TSRF and get your funding commitment BEFORE the FR document is signed. You MUST submit a completed and funded TSRF to the RCS when you submit the signed FR Document to RCS for publication processing. (see attached pdfs)

4) **Docket Verification and Certification Form - Use the electronically fillable and signature enabled pdf form that is**

available through FDMS. The completed form will be used to satisfy the "proof of docket" requirement because it shows that the docket manager has verified that the docket you cited has indeed been established for your action, and that you have or are in the process of submitting all of the relevant documentation that must be in the docket. You will need to provide completed form to us when you submit the signed FR Document for publication processing (see below).

5) **Action Information Sheet – Required information from OP for all documents going to the OFR. Please fill out the information and return the form or else your document will not be processed for publication by OP.**

6) **Fill out the ADP tracker with the SANS information also!!!**

AFTER signature, deliver the following to RCS in WJC East Rm 3159:

1) **FR Document – The original signed & dated FR Document.**

   Remember: The original must be SINGLE-SIDED!

2) **Typesetting Request Form – The original signed, funded & dated form.**

   Remember: Include documentation of the funding commitment.

3) **Docket Verification and Certification Form – The signed & dated form.**

4) **Action Information Sheet – send back the paper copy!**

If you have questions, let me know.

THANKS,

Mary F. Travers
Regulatory Coordination Staff (7101M)
Office of Chemical Safety and Pollution Prevention
United States Environmental Protection Agency
202 566-1588 (Office)
240 210-2318 (Cell)
202 566-2068 (Fax)

Travers.mary-f@epa.gov

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 721

[EPA-HQ-OPPT-2018-0159; FRL-9978-76]

RIN 2070–AK45

Asbestos; Significant New Use Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Under the Toxic Substances Control Act (TSCA), EPA is proposing a significant new use rule (SNUR) for asbestos as defined under the Asbestos Hazard Emergency Response Act. The proposed significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for certain uses identified by EPA as no longer ongoing. The Agency has found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement). Persons subject to the SNUR would be required to notify EPA at least 90 days before commencing any manufacturing (including importing) or processing of asbestos (including as part of an article) for a significant new use. The required notification initiates EPA's evaluation of the conditions of use associated with the intended use within the applicable review period. Manufacturing (including

importing) and processing (including as part of an article) for the significant new use may not commence until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

DATES: Comments must be received on or before [*insert date* 60 *days after date of publication in the* **Federal Register**].

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPPT-2018-0159, by one of the following methods:

• *Federal eRulemaking Portal*: *http://www.regulations.gov*. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

• *Mail*: Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., Washington, DC 20460-0001.

• *Hand Delivery*: To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html*.

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets*.

FOR FURTHER INFORMATION CONTACT: *For technical information contact:* Robert Courtnage, National Program Chemicals Division (Mail Code 7404T), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania

Ave., NW., Washington, DC 20460-0001; telephone number: (202) 566-1081; email address: *courtnage.robert@epa.gov.*

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554-1404; email address: *TSCA-Hotline@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

You may be potentially affected by this action if you manufacture (including import), process, or distribute in commerce asbestos as defined by TSCA Title II, Section 202 (15 U.S.C. 2642) (including as part of an article). The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Construction (NAICS code 23)
- Manufacturing (NAICS codes 31 – 33)
- Wholesale Trade (NAICS code 42)
- Transportation (NAICS code 48)

This action may also affect certain entities through pre-existing import certification and export notification rules under TSCA (15 U.S.C.2601 *et seq.*). Persons who import or process any chemical substance governed by a final SNUR are subject to the TSCA section 13 (15 U.S.C. 2612) import certification requirements and the

corresponding regulations at 19 CFR 12.118 through 12.127 (see also 19 CFR 127.28). Those persons must certify that the shipment of the chemical substance complies with all applicable rules and orders under TSCA, including any SNUR requirements. The EPA policy in support of import certification appears at 40 CFR part 707, subpart B.

In addition, asbestos, as defined in this proposed rule, is already subject to TSCA section 6(a) (40 CFR part 763, subparts G and I) rules that trigger the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b); see also 40 CFR 721.20). Any person who exports or intends to export asbestos must comply with the export notification requirements in 40 CFR part 707, subpart D; however, although EPA is proposing to make inapplicable the exemption at 40 CFR 721.45(f) for persons who import or process any asbestos as part of an article in a category listed in Table 2, the Agency is not proposing to require export notification for articles containing asbestos.

If you have any questions regarding the applicability of this action to a particular entity, consult the technical information contact listed under **FOR FURTHER INFORMATION CONTACT**.

B. What Is the Agency's Authority for Taking this Action?

Section 5(a)(2) of TSCA (15 U.S.C. 2604(a)(2)) authorizes EPA to determine that a use of a chemical substance is a "significant new use." EPA must make this determination by rule after considering all relevant factors, including those listed in TSCA section 5(a)(2) (see Unit IV). Once EPA determines that a use of a chemical substance is a significant new use, TSCA section 5(a)(1) requires persons to submit a significant new use notice (SNUN) to EPA at least 90 days before they manufacture (including import) or process the chemical substance for that use (15 U.S.C.

2604(a)(1)(B)(i)). TSCA further prohibits such manufacturing (including importing) or processing from commencing until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination (15 U.S.C. 2604(a)(1)(B)(ii)). As described in Unit V., the general SNUR provisions are found at 40 CFR part 721, subpart A.

C. What Action Is the Agency Taking?

EPA is proposing a SNUR for asbestos, using the definition in TSCA Title II, Section 202, which defines asbestos as the "asbestiform varieties of six fiber types – chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." The proposed significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for certain uses no longer ongoing. The Agency found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement).

The Frank R. Lautenberg Chemical Safety for the 21st Century Act (Pub. L. 114-182, 130 Stat. 448) amended TSCA in June 2016. The new law includes statutory requirements related to the risk evaluations of conditions of use for existing chemicals. Based on the 2014 update of EPA's TSCA Work Plan for Chemical Assessments, in December of 2016, EPA designated asbestos as one of the first 10 chemical substances

subject to the Agency's initial chemical risk evaluations (81 FR 91927), as required by TSCA section 6(b)(2)(A) (15 U.S.C. 2605(b)(2)(A)).

EPA is separately conducting a risk evaluation of asbestos under its conditions of use, pursuant to TSCA section 6(b)(4)(A). Through scoping and subsequent research for the asbestos risk evaluation, EPA identified several conditions of use of asbestos to include in the risk evaluation. Those include imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production and several imported chrysotile asbestos-containing materials, including sheet gaskets for use in titanium dioxide chemical production, brake blocks for use in oil drilling, aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products. This proposed significant new rule would not identify as significant new uses those uses that EPA believes are currently ongoing. EPA is requesting public comment on this proposal and welcomes specific and verifiable documentation of any ongoing uses not identified by the Agency as well as additional uses not identified as no longer ongoing. This proposed SNUR would require persons that intend to manufacture (including import) or process any form of asbestos as defined under Title II of TSCA (including as part of an article) for a significant new use, consistent with the requirements at 40 CFR 721.25, to notify EPA at least 90 days before commencing such manufacturing (including importing) or processing. This proposed SNUR would preclude the commencement of such manufacturing (including importing) or processing until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

D. Why Is the Agency Taking this Action?

This proposed SNUR is necessary to ensure that EPA receives timely advance notice of any future manufacturing (including importing) or processing of asbestos (including as part of an article) for new uses that may produce changes in human and environmental exposures, and to ensure that an appropriate determination (relevant to the risks associated with such manufacturing (including importing), processing, and use) has been issued prior to the commencement of such manufacturing (including importing) or processing. Today's action is furthermore necessary to ensure that manufacturing (including importing) or processing for the significant new use cannot proceed until EPA has responded to the circumstances by taking the required actions under Sections 5(e) or 5(f) of TSCA in the event that EPA determines any of the following: (1) that the significant new use presents an unreasonable risk under the conditions of use (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); (2) that the information available to EPA is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use; (3) that, in the absence of sufficient information, the manufacturing (including importing), processing, distribution in commerce, use, or disposal of the substance, or any combination of such activities, may present an unreasonable risk (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); or (4) that there is substantial production and sufficient potential for environmental release or human exposure (as defined in TSCA section 5(a)(3)(B)(ii)(II)).

There is a strong causal association between asbestos exposure and lung cancer and mesotheliomas (tumors arising from the thin membranes that line the chest (thoracic) and abdominal cavities and surround internal organs) (Ref. 1; Ref. 2; Ref. 3; Ref. 4; Ref. 5; Ref. 6). In addition, other cancers, as well as non-cancer effects, such as respiratory and immune effects, have been associated with asbestos exposure (Ref. 7).

Agency research conducted in support of the TSCA risk evaluation of asbestos revealed that the use of asbestos has declined dramatically in the United States since the 1970s when asbestos use was at its peak. EPA is taking action in this proposed rule to ensure that EPA receives timely advance notice and makes an appropriate determination prior to the commencement of manufacturing (including importing) or processing for any significant new use of asbestos (including as part of an article) as identified in Table 2. The rationale and objectives for this proposed SNUR are explained in detail in Unit III.

E. What are the Estimated Incremental Impacts of this Action?

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers (including importers) and processors of the chemical substance included in this proposed rule. This Economic Analysis (Ref. 8), which is available in the docket, is discussed in Unit IX. and is briefly summarized here.

In the event that a SNUN is submitted, costs are estimated to be less than $10,000 per SNUN submission for large business submitters and $8,000 for small business submitters. In addition, for persons exporting a substance that is the subject of a SNUR, a one-time notice to EPA must be provided for the first export or intended export to a particular country, which is estimated to be approximately $96 per notification. However, asbestos is already subject to TSCA section 6(a) rules (40 CFR part 763, subparts G and

I) that trigger the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b); see also 40 CFR 721.20), and the Agency is not proposing to require export notifications for articles containing asbestos as articles are generally excluded from the TSCA section 12(b) export notification requirements. Therefore, EPA assumes no additional costs under TSCA section 12(b) for this proposed rule.

The proposed rule may also affect firms that plan to import or process articles that may be subject to the SNUR. Although there are no specific requirements in the rule for these firms, they may choose to undertake some activity to assure themselves they are not undertaking a new use. In the accompanying Economic Analysis for this proposed SNUR (Ref. 8), example steps (and their respective costs) that an importer or processor might take to identify asbestos in articles are provided. These steps can include gathering information through agreements with suppliers, declarations through databases or surveys, or use of a third-party certification system. Additionally, importers may require suppliers to provide certificates of testing analysis of the products or perform their own laboratory testing of certain articles. EPA is unable to predict, however, what, if any, particular steps an importer might take; thus, potential total costs were not estimated.

II. Chemical Substances Subject to this Proposed Rule and Associated Background Information

A. What Chemicals Are Included in the Proposed SNUR?

This proposed SNUR applies to asbestos, using the definition in TSCA Title II (added to TSCA in 1986), Section 202, which defines asbestos as the "asbestiform varieties of six fiber types – chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." This proposed SNUR

applies to the manufacturing (including importing) or processing of asbestos (including as part of an article) for certain uses no longer ongoing. EPA found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement). Under this proposed SNUR, the exemption at 40 CFR 721.45(f) would not apply to persons who import or process asbestos as part of an article (which includes as a component of an article) because there is reasonable potential for exposure to asbestos if the substance is incorporated into articles and then imported or processed. However, in accordance with the impurity exclusion at 40 CFR 721.45(d), this proposed significant new use rule would not apply to persons who manufacture (including import) or process asbestos (including as part of an article) only as an impurity.

B. What Are the Production Volumes and Uses of Asbestos?

Asbestos has not been mined or otherwise produced in the United States since 2002; therefore, any new raw bulk asbestos used in the United States is imported. According to the U.S. Geological Survey (USGS), approximately 300 metric tons of raw bulk asbestos was imported into the United States in 2017 (Ref. 9). Chrysotile is the only form of raw bulk asbestos currently imported, and the chlor-alkali industry is the only known importer (Ref. 9). EPA did not identify any domestic entity that uses raw bulk asbestos other than the chlor-alkali industry, which uses chrysotile asbestos to fabricate

diaphragms for use in chlorine and sodium hydroxide production.

In an effort to identify national import volumes and conditions of use for the asbestos risk evaluation under TSCA section 6(b)(4)(A), EPA searched a number of available data sources including EPA's Chemical Data Reporting (CDR) database, USGS's Mineral Commodities Summary and the Minerals Yearbook, the U.S. International Trade Commission's Dataweb, the U.S. Customs and Border Protection's Automated Commercial Environment (ACE) System, and the *Use and Market Profile for Asbestos* (EPA-HQ-OPPT-2016-0736-0085). Based on this search, EPA published a preliminary list of information and sources related to asbestos conditions of use (see *Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos*, EPA-HQ-OPPT-2016-0736-0005) prior to a February 2017 public meeting on the scoping efforts for the risk evaluation convened to solicit public comment. EPA also convened meetings with companies, associated industry groups, chemical users and other stakeholders to aid in identifying conditions of use and verifying conditions of use identified by EPA. On June 22, 2017, EPA published the *Scope of the Risk Evaluation for Asbestos* (EPA-HQ-OPPT-2016-0736-0086), which further provided opportunity for the public and private sector to identify conditions of use of asbestos in the United States.

During the public comment period for the *Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos* (EPA-HQ-OPPT-2016-0736-0005), one company identified the use of asbestos-containing gaskets, which are imported, for use during the production of titanium dioxide. During stakeholder discussions another company confirmed importing and distributing brake blocks for use in drawworks by the oil industry. EPA believes that aftermarket automotive

brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products containing asbestos could also be imported, as reported by USGS (Ref. 10) and also appear in data from ACE (Ref. 11); however, the volume of products and the quantity of asbestos within imported products is unknown. ACE is not a publicly accessible database because it contains information that is protected under the provisions of Freedom of Information Act (5 U.S.C. 552), the Privacy Act (5 U.S.C. 552a), and the Trade Secrets Act (18 U.S.C. 1905), and the information in ACE related to importer identity cannot be released.

C. What Are the Potential Health Effects of Asbestos?

Asbestos was listed as a known human carcinogen in the National Toxicology Program's *First Annual Report on Carcinogens* in 1980 (Ref. 1). In 1988, EPA assessed the health hazards and effects caused by exposure to asbestos under the Integrated Risk Information System (IRIS) program, and determined that asbestos exposure can lead to lung cancer and mesotheliomas (tumors arising from the thin membranes that line internal organs) (Ref. 2). Many authorities have established that there is causal association between asbestos and lung cancer and mesotheliomas (Ref. 1; Ref. 3; Ref. 4). EPA also noted in the *Scope of the Risk Evaluation for Asbestos* that there is a causal association between exposure to asbestos and cancer of the larynx and cancer of the ovary (Ref. 4). There is also suggestive evidence of a positive association between asbestos and cancer of the pharynx (Ref. 4; Ref. 12), stomach (Ref. 3; Ref. 4), and colorectum (Ref. 1; Ref. 3; Ref. 4; Ref. 12; Ref. 13; Ref. 14). All types of asbestos fibers have been reported to cause mesothelioma. (Ref. 4).

Increases in lung cancer mortality have been reported in both workers and

residents exposed to various asbestos fiber types as well as fiber mixtures (Ref. 4). There is evidence in in-vitro, animal, and human studies that asbestos is genotoxic, meaning asbestos can damage an organism's genetic material (Ref. 3). There is also evidence that asbestos exposure is associated with adverse respiratory system effects, such as asbestosis and immunotoxicity (Ref. 3; Ref. 7).

D. What Are the Potential Routes and Sources of Exposure to Asbestos

The greatest risk of exposure to asbestos occurs when the substance is in a friable state, meaning the fibers can be crumbled, pulverized or reduced to a powder under hand pressure (Ref. 3). During use and over time, non-friable asbestos has the potential to become friable (Ref. 3). For example, testing has shown that non-friable asbestos-containing material can become friable during use such as cutting, crumbling, and tearing, and as a result of such use, asbestos fibers can be released into the air (Ref. 15). Similarly, non-friable asbestos-containing building materials can release fibers if disturbed during building repair or demolition (Ref. 16). Exposures to workers, consumers and the general population, as well as environmental receptors, may occur from industrial releases and use of asbestos-containing products. Based on EPA's research conducted during the early stages of the TSCA risk evaluation, most of the ongoing uses of asbestos pertain to industrial and commercial uses (Ref. 7).

The primary exposure route for asbestos is inhalation. Asbestos fibers can be released into the air during processing of raw bulk asbestos and asbestos-containing products. Weathering and the disturbance and/or degradation of asbestos-containing products can also cause asbestos fibers to be suspended in air (Ref. 3). Fibers can then enter the lungs through inhalation. Exposures to asbestos can potentially occur via oral

and dermal routes; however, EPA anticipates that the most likely exposure route is inhalation.

III. Rationale and Objectives

A. Rationale

EPA is concerned about the potential for adverse health effects of asbestos based on established sound scientific data indicating that asbestos is a known human carcinogen. Asbestos was listed as a human carcinogen in the National Toxicology Program's *First Annual Report on Carcinogens* in 1980 (Ref. 1).

Asbestos, in particular chrysotile asbestos, has several unique properties, including low electrical conductivity while maintaining high tensile strength, high friction coefficient, and high resistance to heat (Ref. 17). These properties made asbestos ideal for use in friction materials (e.g. brakes), insulation (e.g. sound, heat, and electrical), and building materials (e.g. cement pipes, roofing compounds, flooring) over the past century. However, the use of asbestos has declined dramatically due to health concerns and consumer preference (Ref. 17), which has led to the elimination of some exposure scenarios associated with such uses. According to USGS, in 1973, national consumption, including manufacturing/importing and processing, of raw bulk asbestos peaked around 800,000 metric tons and has since fallen approximately 99 percent to between 300 and 800 metric tons in recent years (Ref. 9). Today, most manufactured products in the United States are now asbestos-free (Ref. 17).

In 1989, EPA published a final rule *Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions* (54 FR 29460, July 12, 1989) (FRL-3476-2), which was intended "to prohibit, at staged intervals, the future

manufacture, importation, processing and distribution in commerce of asbestos in almost all products, as identified in the rule . . ." and to "reduce the unreasonable risks presented to human health by exposure to asbestos during activities involving these products." The 1989 final rule applied to the asbestos product categories identified in the *Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products,* which was conducted in support of the rule (Ref. 20). However, the ban against most of the asbestos product categories was overturned by the Fifth Circuit Court of Appeals in 1991. In addition to the asbestos products that remain banned after the court ruling, which are identified in Table 1 below, any new use of asbestos was also banned. The prohibition on any new uses of asbestos is for uses initiated for the first time after August 25, 1989. As a point of clarification, in this proposed rulemaking, a significant new use of asbestos addresses multiple uses that were initiated prior to August 25, 1989, for which manufacturing and processing are no longer ongoing in the United States.

Table 1: Asbestos Containing Product Categories Banned Under TSCA Section 6

Product Category	**Definition (40 CFR 763.163)**
Corrugated Paper	Corrugated paper means an asbestos-containing product made of corrugated paper, which is often cemented to a flat backing, may be laminated with foils or other materials, and has a corrugated surface. Major applications of asbestos corrugated paper include: thermal insulation for pipe coverings; block insulation; panel insulation in elevators; insulation in appliances; and insulation in low-pressure steam, hot water, and process lines.

Rollboard	Rollboard means an asbestos-containing product made of paper that is produced in a continuous sheet, is flexible, and is rolled to achieve a desired thickness. Asbestos rollboard consists of two sheets of asbestos paper laminated together. Major applications of this product include: office partitioning; garage paneling; linings for stoves and electric switch boxes; and fire-proofing agent for security boxes, safes, and files.
Commercial Paper	Commercial paper means an asbestos-containing product that is made of paper intended for use as general insulation paper or muffler paper. Major applications of commercial papers are insulation against fire, heat transfer, and corrosion in circumstances that require a thin, but durable, barrier.
Specialty Paper	Specialty paper means an asbestos-containing product that is made of paper intended for use as filters for beverages or other fluids or as paper fill for cooling towers. Cooling tower fill consists of asbestos paper that is used as a cooling agent for liquids from industrial processes and air conditioning systems.
Flooring Felt	Flooring felt means an asbestos-containing product that is made of paper felt intended for use as an underlayer for floor coverings, or to be bonded to the underside of vinyl sheet flooring.

New Uses*	The commercial uses of asbestos not identified in §763.165 the manufacture, importation or processing of which would be initiated for the first time after August 25, 1989.
**Note: a "new use" as defined in 40 CFR 763.163 is distinct from a significant new use per TSCA section 5(a)(2), which is explained for the purposes of this proposed rule in Table 2.*	

As part of the information gathering activity associated with the current asbestos risk evaluation, the Agency researched market availability for the asbestos product categories subject to the 1989 asbestos ban and phase-out rule that was later overturned. EPA identified several asbestos product categories where manufacturing (including importing) and processing for the use is no longer ongoing. Through further refinement of the *Scope of the Risk Evaluation for Asbestos*, the Agency determined that asbestos-containing cement products (e.g., pipe, shingles and replacement parts) are the only condition of use of asbestos in building materials; therefore, this proposed SNUR also applies to all asbestos-containing building materials other than asbestos cement products. These product categories and descriptions are listed in Table 2, and manufacturing and processing for these product categories are significant new uses subject to this proposed rulemaking. The product category descriptions are based on the product category descriptions presented in the *Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products* for the 1989 final rule (Ref. 20) and may not be all-encompassing.

Table 2: Product Categories of Proposed Significant New Uses of Asbestos

Product Category	**Description of the Product Category**
Arc Chutes	Ceramic arc chutes containing asbestos were used to guide electric arcs in motor starter units in electric generating plants.
Beater-Add Gaskets	Asbestos fibers were incorporated within various elastomeric binders and other fillers to form the beater-add paper. These products were used extensively for internal combustion applications and for the sealing component of spiral wound gaskets. Gaskets were used to seal one compartment of a device from another in non-dynamic applications such as engine and exhaust manifolds.
Extruded Sealant Tape and Other Tape	Sealant tape was made from a semi-liquid mixture of butyl rubber and asbestos. On exposure to air, the sealant solidified forming a rubber tape about an inch wide and an eighth of an inch thick. The tape acted as a gasket for sealing building windows, automotive windshields, and mobile home windows. It was also used in the manufacture of parts for the aerospace industry and in the manufacture of insulated glass.
Filler for Acetylene Cylinders	Asbestos was used to produce a sponge-like filler, which held the liquefied acetylene gas (acetone) in suspension in the steel cylinder and puled the acetone up through the tank as the gas was released through the oxyacetylene torch. The torch was used to weld or cut metal and sometimes used as an illuminant gas. The filler also acted as an insulator that offered fire protection in case the oxidation of the

	acetylene became uncontrollable.
High-Grade Electrical Paper	The major use of asbestos electrical paper was insulation for high temperature, low voltage applications such as in motors, generators, transformers, switch gears, and other heavy electrical apparatuses.
Millboard	Asbestos millboard was essentially a heavy cardboard product that was used for gasketing, insulation, fireproofing, and resistance against corrosion and rot. Millboard was used in many industrial applications to include linings in boilers, kilns, and foundries; insulation in glass tank crowns, melters, refiners, and sidewalls in the glass industry; linings for troughs and covers in the aluminum, marine, and aircraft industries; and thermal protection in circuit breakers in the electrical industry. In addition, thin millboard was inserted between metal to produce gaskets. Commercial applications for millboard included fireproof linings for safes, dry-cleaning machines, and incinerators.
Missile Liner	A missile liner was an asbestos and rubber compound used to insulate the outer casing of the rocket from the intense heat generated in the rocket motor while the rocket fuel was burned. Rockets and rocket boosters were used to propel a number of objects including military weapons and the space shuttle.
Adhesives, Sealants, and Roof and Non-	The automobile industry historically used asbestos in a wide variety of adhesive, sealant, and coating applications. The aerospace industry used asbestos in extremely specialized applications such as firewall

Roof Coatings	sealants and epoxy adhesives. Non-roof coatings were used to prevent corrosion (e.g. as vehicle undercoatings and underground pipe coatings). Roof coatings were used to repair and patch roofs, seal around projections such as chimneys and vent pipes, and bond horizontal and vertical surfaces.
Pipeline Wrap	Pipeline wrap was an asbestos felt product primarily used by the oil and gas industry for coating its pipelines. Asbestos pipeline wrap was also used in the coal tar enamel method of coating pipes, some above-ground applications (such as for special piping in cooling towers), and was also used by the chemical industry for underground hot water and steam piping.
Reinforced Plastics	Asbestos-reinforced plastics were used for electro-mechanical parts in the automotive and appliance industries and as high-performance plastics for the aerospace industry. Asbestos-reinforced plastic was typically a mixture of some type of plastic resin (usually phenolic or epoxy), a general filler (often chalk or limestone), and raw asbestos fiber.
Roofing Felt	Asbestos roofing felt was single or multi-layered grade and used for built-up roofing. Asbestos was used in roofing felts because of its dimensional stability and resistance to rot, fire, and heat.
Separators in Fuel	In very specialized aerospace applications, asbestos functioned as an insulator and separator between the negative and positive terminals of

Cells and Batteries	a fuel cell/battery.
Vinyl-Asbestos Floor Tile	Vinyl-asbestos floor tile was used in commercial, residential, and institutional buildings in heavy traffic areas such as supermarkets, department stores, commercial plants, kitchens, and "pivot points" – entry ways and areas around elevators
Any Other Building Materials (other than cement)*	Examples include insulation, plasters, mastics, textured paints (e.g., simulates stucco), and block filler paints (e.g., for coating masonry).
**Note: Not a product category described in the same terms in the Regulatory Impact Analysis; this broader product category is used generally to describe a number of specific product categories identified during the TSCA section 6 risk evaluation process.*	

As part of the current asbestos risk evaluation process, the Agency identified conditions of use to be considered under the TSCA risk evaluation. Those include: imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production and several imported chrysotile asbestos-containing materials including sheet gaskets for use in titanium dioxide chemical production, brake blocks for use in oil drilling, aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products. These ongoing uses identified by EPA are not among the significant new uses identified in this proposal and therefore would not require a significant new use notification submission to the Agency. EPA requests comment regarding any ongoing

uses not identified by the Agency and welcomes specific and verifiable documentation. EPA also requests comment on additional uses not identified as no longer ongoing.

In the absence of this proposed rule, the importing or processing of asbestos (including as part of an article) for the significant new uses proposed in this rule may begin at any time, without prior notice to EPA. Thus, EPA is concerned that commencement of the manufacturing (including importing) or processing for the significant new uses of asbestos identified in Table 2 could significantly increase the volume of manufacturing (including importing) and processing of asbestos as well as the magnitude and duration of exposure to humans over that which would otherwise exist currently. EPA has preliminarily concluded that action on this chemical substance is warranted and therefore proposes that any manufacturing (including importing) or processing of asbestos (including as part of an article), using the definition under Title II of TSCA, for any use identified in Table 2 would be a significant new use.

Consistent with EPA's past practice for issuing SNURs under TSCA section 5(a)(2), EPA's decision to propose a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use. If a person decides to begin manufacturing (including importing) or processing asbestos (including as part of an article) for a use identified in Table 2, the notice to EPA allows the Agency to evaluate the use according to the specific parameters and circumstances surrounding the conditions of use.

B. Rationale for Making Inapplicable the Exemption at 40 CFR 721.45(f) for Persons who Import or Process Asbestos

Chemical substances that are part of an article may still result in exposure if the chemical substance has certain physical-chemical properties – as in the case of asbestos, fibers can degrade with use and become friable over time where human exposures can occur leading to increased risks for disease (Ref. 3; Ref. 15; Ref. 16). During use and over time, non-friable asbestos has the potential to become friable (Ref. 3). For example, testing has shown that non-friable asbestos-containing material can become friable during use such as cutting, crumbling, and tearing, and as a result of such use, asbestos fibers can be released into the air (Ref. 15). Similarly, non-friable asbestos-containing building materials can release fibers if disturbed during building repair or demolition (Ref. 16). Therefore, EPA is proposing to make inapplicable the exemption at 40 CFR 721.45(f) for persons who import or process any asbestos as part of an article for the proposed significant new uses, which are identified in Table 2. A person who imports or processes asbestos (including as part of an article) for a proposed significant new use identified in Table 2 would be subject to the significant new use notification requirements in this proposed rule. No person would be able to begin importing or processing asbestos (including as part of an article) for a proposed significant new use without first submitting a SNUN to EPA and until the Agency has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

As requested in Unit XII., EPA asks for comment on the Agency's understanding of ongoing uses. When submitting a comment to the Agency, EPA requests specific and verifiable information that provides evidence of ongoing uses beyond those identified in this proposed rule.

C. Objectives

Based on the considerations in Unit III.A., EPA wants to achieve the following objectives with regard to the significant new use of asbestos (including as part of an article) as designated in this proposed rule:

1. EPA would receive notice of any person's intent to manufacture (including import) or process asbestos (including as part of an article) for the described significant new use before that activity begins.

2. EPA would have an opportunity to review and evaluate data submitted in a SNUN before the notice submitter begins manufacturing (including importing) or processing asbestos (including as part of an article) for the described significant new use.

3. EPA would be able to either determine that the significant new use is not likely to present an unreasonable risk, or take necessary regulatory action associated with any other determination before the described significant new use of asbestos (including as part of an article) occurs.

IV. Significant New Use Determination

Section 5(a)(2) of TSCA states that EPA's determination that a use of a chemical substance is a significant new use must be made after consideration of all relevant factors including:

1. The projected volume of manufacturing and processing of a chemical substance.

2. The extent to which a use changes the type or form of exposure of human beings or the environment to a chemical substance.

3. The extent to which a use increases the magnitude and duration of exposure of

human beings or the environment to a chemical substance.

4. The reasonably anticipated manner and methods of manufacturing, processing, distribution in commerce, and disposal of a chemical substance.

In addition to these factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

Both federal and state environmental protection agencies and occupational safety and health organizations provide existing regulation pertaining to certain aspects of the manufacturing (including importing), processing, use, and/or disposal of asbestos in order to protect consumers, workers, and the environment. EPA believes the significant new uses of asbestos identified in Table 2 could increase the volume of manufacturing (including importing) and processing of asbestos, as well as the duration and magnitude of human and environmental exposure to the substance, reverse the declining trend of national import volumes of the substance, and reintroduce exposure scenarios that have become obsolete over the past several decades. It is imperative that EPA be notified of any intended significant new use of asbestos identified in Table 2 and be provided the opportunity to evaluate such proposed new use. Once a SNUR is finalized, failure to notify EPA and file a SNUN prior to manufacturing or processing for the significant new uses would constitute a violation of TSCA and would be subject to penalties, accordingly.

To determine what would constitute a significant new use of asbestos as discussed in this unit, EPA considered relevant information about the toxicity or expected toxicity of the substance, likely human exposures and environmental releases associated with possible uses, and the four factors listed in Section 5(a)(2) of TSCA. In addition to these

factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

The article exemption at 40 CFR 721.45(f) is based on an assumption that people and the environment will generally not be exposed to chemical substances in articles (Ref. 18). However, even when contained in an article, asbestos can become friable over time with use (Ref. 3; Ref. 15; Ref. 16). Based on this understanding, upon submission of a SNUN, EPA intends to evaluate the potential risk of exposure to human health and the environment for any proposed significant new use of asbestos (including as part of an article). This understanding warrants making the exemption at 40 CFR 721.45(f) inapplicable to importers or processors of articles containing asbestos. Considering the potential friability of asbestos, even when incorporated in articles, and the health risks associated with exposure to asbestos, EPA proposes to affirmatively find under TSCA section 5(a)(5) that notification is justified by the reasonable potential for exposure to asbestos through the articles subject to this SNUR. EPA intends to evaluate such potential uses whether in the form of an article or not before those uses would begin for any associated risks or hazards that might exist. EPA has reason to anticipate that importing or processing asbestos as part of an article would create the potential for exposure to asbestos, and that EPA should have an opportunity to review the intended use before such use could occur. Persons subject to this proposed SNUR are required to notify EPA at least 90 days prior to commencing manufacturing (including importing) or processing of the substance for the new use. This required notification provides EPA with the opportunity to evaluate an intended significant new use of the regulated chemical substance and, if necessary, an opportunity to protect against potential unreasonable risks.

V. Applicability of General Provisions

General provisions for SNURs appear under 40 CFR part 721, subpart A. These provisions describe persons subject to the rule, recordkeeping requirements, and exemptions to reporting requirements.

Provisions relating to user fees appear at 40 CFR part 700. According to 40 CFR 721.1(c), persons subject to SNURs must comply with the same notice requirements and EPA regulatory procedures as submitters of Premanufacture Notices (PMNs) under TSCA section 5(a)(1)(A). In particular, these requirements include the information submission requirements of TSCA sections 5(b) and 5(d)(1), the exemptions authorized by TSCA sections 5(h)(1), (h)(2), (h)(3), and (h)(5), and the regulations at 40 CFR part 720. Once EPA receives a SNUN, EPA must either determine that the significant new use is not likely to present an unreasonable risk of injury or take such regulatory action as is associated with an alternative determination before the manufacturing (including importing) or processing for the significant new use can commence. If EPA determines that the significant new use is not likely to present an unreasonable risk, EPA is required under TSCA section 5(g) to make public, and submit for publication in the **Federal Register**, a statement of EPA's finding.

VI. Applicability of Rule to Uses Occurring Before Effective Date of the Final Rule

EPA designates June 1, 2018 (the date of web posting of this proposed rule) as the cutoff date for determining whether the new use is ongoing. The objective of EPA's approach is to ensure that a person cannot defeat a SNUR by initiating a significant new use before the effective date of the final rule. In developing this proposed rule, EPA has recognized that, given EPA's general practice of posting proposed and final SNURs on

its website a week or more in advance of **Federal Register** publication, this objective could be thwarted even before that publication.

Persons who begin commercial manufacturing (including importing) or processing of the chemical substance (to include importing or processing articles and components thereof containing the chemical substance) for a significant new use identified as of June 1, 2018 would have to cease any such activity upon the effective date of the final rule. To resume their activities, these persons would have to first comply with all applicable SNUR notification requirements and wait until all TSCA prerequisites for the commencement of manufacturing (including importing) or processing have been satisfied (see **Federal Register** documents of April 24, 1990 (55 FR 17376) (FRL-3658-5) and November 28, 2016 (81 FR 85472) (FRL-9945-53) for additional information).

VII. Development and Submission of Information

EPA recognizes that TSCA section 5 does not usually require developing new information (e.g., generating test data) before submission of a SNUN; however, there is an exception: development of information is required where the chemical substance subject to the SNUR is also subject to a rule, order, or consent agreement under TSCA section 4 (see TSCA section 5(b)(1)). Also pursuant to TSCA section 4(h), which pertains to reduction of testing of vertebrate animals, EPA encourages consultation with the Agency on the use of alternative test methods and strategies (also called New Approach Methodologies or NAMs), if available, to generate any recommended test data. EPA encourages dialogue with Agency representatives to help determine how best the submitter can meet both the data needs and the objective of TSCA section 4(h).

In the absence of a TSCA section 4 test rule covering the chemical substance,

persons are required to submit only information in their possession or control and to describe any other information known to or reasonably ascertainable by them (15 U.S.C. 2604(d); 40 CFR 721.25, and 40 CFR 720.50). However, as a general matter, EPA recommends that SNUN submitters include information that would permit a reasoned evaluation of risks posed by the chemical substance during its manufacturing (including importing), processing, use, distribution in commerce, or disposal. EPA encourages persons to consult with the Agency before submitting a SNUN. As part of this optional pre-notice consultation, EPA would discuss specific information it believes may be useful in evaluating a significant new use.

Submitting a SNUN that does not itself include information sufficient to permit a reasoned evaluation may increase the likelihood that EPA will either respond with a determination that the information available to the Agency is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use or, alternatively, that in the absence of sufficient information, the manufacturing (including importing), processing, distribution in commerce, use, or disposal of the chemical substance may present an unreasonable risk of injury.

SNUN submitters should be aware that EPA will be better able to evaluate SNUNs and define the terms of any potentially necessary controls if the submitter provides detailed information on human exposure and environmental releases that may result from the significant new uses of the chemical substance.

VIII. SNUN Submissions

EPA recommends that submitters consult with the Agency prior to submitting a SNUN to discuss what information may be useful in evaluating a significant new use.

Discussions with the Agency prior to submission can afford ample time to conduct any tests that might be helpful in evaluating risks posed by the substance. According to 40 CFR 721.1(c), persons submitting a SNUN must comply with the same notice requirements and EPA regulatory procedures as persons submitting a PMN, including submission of test data on health and environmental effects as described in 40 CFR 720.50. SNUNs must be submitted on EPA Form No. 7710-25, generated using e-PMN software, and submitted to the Agency in accordance with the procedures set forth in 40 CFR 721.25 and 40 CFR 720.40. E-PMN software is available electronically at *http://www.epa.gov/opptintr/newchems*.

IX. Economic Analysis

A. SNUNs

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers (including importers) and processors of the chemical substance included in this proposed rule (Ref. 8). In the event that a SNUN is submitted, average costs are estimated at approximately $9,937 per SNUN submission for large business submitters and $7,537 for small business submitters. These estimates include the cost to prepare and submit the SNUN, and the payment of a user fee. Businesses that submit a SNUN would be subject to either a $2,500 user fee required by 40 CFR 700.45(b)(2)(iii), or, if they are a small business with annual sales of less than $40 million when combined with those of the parent company (if any), a reduced user fee of $100 (40 CFR 700.45(b)(1)). On February 26, 2018, EPA proposed raising the fee for SNUNs to $2,800 for small businesses and $16,000 for other businesses (83 FR 8212). Further, on November 30, 2017, EPA determined that revisions to the current small

business size standards for TSCA reporting and recordkeeping requirements are warranted (82 FR 56824). Businesses that submit a SNUN are also estimated to incur average costs of $67 for rule familiarization. First time submitters will incur an average cost of $128 for Central Data Exchange (CDX) registration and associated activities. Companies manufacturing, importing, or processing asbestos or articles containing asbestos will incur an average cost of $80 for notifying their customers of SNUR regulatory activities.

The costs of submitting a SNUN will not be incurred by any company unless a company decides to pursue a significant new use as defined in this proposed SNUR. Additionally, these estimates reflect the costs and fees as they are known at the time this rule is promulgated. EPA's complete economic analysis is available in the public docket for this proposed rule (Ref. 8).

B. Export Notification

Under Section 12(b) of TSCA and the implementing regulations at 40 CFR part 707, subpart D, exporters must notify EPA if they export or intend to export a chemical substance or mixture for which, among other things, a rule has been proposed or promulgated under TSCA section 5. As explained in Unit I., export notifications are required for asbestos, but not for articles containing asbestos. EPA is not proposing that asbestos-containing articles be subject to the export notification requirements; therefore, EPA assumes no additional costs under TSCA section 12(b) for this proposed rule.

In general, for persons exporting a substance that is the subject of a SNUR, a one-time notice to EPA must be provided for the first export or intended export to a particular country. The total costs of export notification will vary by chemical, depending on the

number of required notifications (i.e., the number of countries to which the chemical is exported). While EPA is unable to make any estimate of the likely number of export notifications for the chemical covered in this proposed SNUR, as stated in the accompanying economic analysis of this proposed SNUR, the estimated cost of the export notification requirement on a per unit basis is approximately $96.

C. Import or Processing Chemical Substances as Part of an Article

In making inapplicable the exemption relating to persons that import or process certain chemical substances as part of an article, this action may affect firms that plan to import or process types of articles that may contain the asbestos. Some firms have an understanding of the contents of the articles they import or process. However, EPA acknowledges that importers and processors of articles may have varying levels of knowledge about the chemical content of the articles that they import or process. These parties may need to become familiar with the requirements of the rule. And, while not required by the SNUR, these parties may take additional steps to determine whether the subject chemical substance is part of the articles they are considering for importing or processing. This determination may involve activities such as gathering information from suppliers along the supply chain and/or testing samples of the article itself. Costs vary across the activities chosen and the extent of familiarity a firm has regarding the articles it imports or processes. Cost ranges are presented in the Understanding the Costs Associated with Eliminating Exemptions for Articles in SNURs (Ref. 19). Based on available information, EPA believes that article importers or processors that choose to investigate their products would incur costs at the lower end of the ranges presented in the Economic Analysis. For those companies choosing to undertake actions to assess the

composition of the articles they import or process, EPA expects that importers or processors would take actions that are commensurate with the company's perceived likelihood that a chemical substance might be a part of an article for the significant new uses subject to this proposed rulemaking (identified in Table 2) and the resources it has available. Example activities and their costs are provided in the accompanying Economic Analysis of this proposed rule (Ref. 8).

X. Alternatives

Before proposing this SNUR, EPA considered the following alternative regulatory action: Promulgate a TSCA section 8(a) Reporting Rule.

Under a TSCA section 8(a) rule, EPA could, among other things, generally require persons to report information to the Agency when they intend to manufacture (including import) or process a listed chemical for a specific use or any use. However, for asbestos, the use of TSCA section 8(a) rather than SNUR authority would have several limitations. First, if EPA were to require reporting under TSCA section 8(a) instead of TSCA section 5(a), that action would not ensure that EPA receives timely advance notice of future manufacturing (including importing) or processing of asbestos (including as part of an articles and components thereof) for new uses that may produce changes in human and environmental exposures. Nor would action under 8(a) ensure that an appropriate determination (relevant to the risks of such manufacturing (including importing) or processing) has been issued prior to the commencement of such manufacturing (including importing) or processing. Furthermore, a TSCA section 8(a) rule would not ensure that manufacturing (including importing) or processing for the significant new use cannot proceed until EPA has responded to the circumstances by taking the required actions

under Sections 5(e) or 5(f) of TSCA in the event that EPA determines any of the following: (1) that the significant new use presents an unreasonable risk under the conditions of use (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); (2) that the information available to EPA is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use; (3) that in the absence of sufficient information, the manufacture (including import), processing, distribution in commerce, use, or disposal of the substance, or any combination of such activities, may present an unreasonable risk (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); or (4) that there is substantial production and sufficient potential for environmental release or human exposure (as defined in TSCA section 5(a)(3)(B)(ii)(II)).

In addition, EPA may not receive important information from small businesses, because such firms generally are exempt from TSCA section 8(a) reporting requirements (see TSCA sections 8(a)(1)(A) and 8(a)(1)(B)). In view of the level of health concerns about asbestos if used for a proposed significant new use, EPA believes that a TSCA section 8(a) rule for this substance would not meet EPA's regulatory objectives.

XI. Scientific Standards, Evidence, and Available Information

EPA has used scientific information, technical procedures, measures, methods, protocols, methodologies, and models consistent with the best available science, as applicable. These sources supply information relevant to whether a particular use would be a significant new use, based on relevant factors including those listed under TSCA

section 5(a)(2). As noted in Unit III., EPA's decision to promulgate a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use.

The clarity and completeness of the data, assumptions, methods, quality assurance, and analyses employed in EPA's decision are documented, as applicable and to the extent necessary for purposes of this proposed significant new use rule, in Unit II. and in the references cited throughout the preamble of this proposed rule. EPA recognizes, based on the available information, that there is variability and uncertainty in whether any particular significant new use would actually present an unreasonable risk. For precisely this reason, it is appropriate to secure a future notice and review process for these uses, at such time as they are known more definitively. The extent to which the various information, procedures, measures, methods, protocols, methodologies or models used in EPA's decision have been subject to independent verification or peer review is adequate to justify their use, collectively, in the record for a significant new use rule.

XII. Request for Comment

A. Do you have comments or information about ongoing uses?

EPA welcomes comment on all aspects of this proposed rule. EPA based its understanding of the use profile of this chemical on the published literature, the 2016 Chemical Data Reporting submissions, market research, review of Safety Data Sheets, and extensive research conducted during the early stages of the TSCA risk evaluation for asbestos. To confirm EPA's understanding, the Agency is requesting public comment on all aspects of this proposed rule. In providing comments on an ongoing use of asbestos, it

would be helpful to provide specific information and documentation sufficient for EPA to substantiate any assertions of use.

B. What Should I Consider as I Prepare my Comments for EPA?

1. *Submitting CBI.* It is EPA's policy to include all comments received in the public docket without change or further notice to the commenter and to make the comments available online at *www.regulations.gov*, including any personal information provided, unless a comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit this information to EPA through *regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM that you mail to EPA as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2, subpart B.

2. *Tips for preparing your comments*. When preparing and submitting your comments, see the commenting tips at *http://www2.epa.gov/dockets/commenting-epa-dockets#tips*.

XIII. References

The following is a listing of the documents that are specifically referenced in this document. The docket, EPA-HQ-OPPT-2018-0159, includes these documents and other information considered by EPA, including documents that are referenced within the

documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

1. National Toxicology Program. (NTP, 2016). Report on Carcinogens, Fourteenth Edition.; Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service. Retrieved from [HYPERLINK "https://ntp.niehs.nih.gov/ntp/roc/content/profiles/asbestos.pdf"].

2. U.S. Environmental Protection Agency. (EPA, 1988). IRIS summary for asbestos (CASRN 1332-21-4). Washington, DC: Integrated Risk Information System. Retrieved from *http://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0371_summary.pdf* .

3. Agency for Toxic Substances and Disease Registry. (ATSDR, 2001). Toxicological profile for asbestos (update). Retrieved from [HYPERLINK "https://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=30&tid=4"].

4. International Agency for Research on Cancer. (IARC, 2012). A review of human carcinogens. Part C: Arsenic, metals, fibres, and dusts [IARC Monograph]. Lyon, France: World Health Organization. Retrieved from [HYPERLINK "http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C.pdf"].

5. International Agency for Research on Cancer. (IARC, 1977). IARC monographs on the evaluation of carcinogenic risk of chemicals to man: Asbestos. Lyon, France: World Health Organization. Retrieved from [HYPERLINK "http://monographs.iarc.fr/ENG/Monographs/vol1-42/mono14.pdf"].

6. International Agency for Research on Cancer. (IARC, 1987). Asbestos and certain asbestos compounds [IARC Monograph]. In IARC Monographs on the Evaluation of Carcinogenic Risks to Humans (pp. 106-116). Lyon, France. Retrieved from [HYPERLINK "http://monographs.iarc.fr/ENG/Monographs/suppl7/index.php"].

7. U.S. Environmental Protection Agency. (EPA, 2017). Scope of the Risk Evaluation for Asbestos. Retrieved from [HYPERLINK "https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0736-0086"].

8. U.S. Environmental Protection Agency. (EPA, 2018). Economic Analysis for the Proposed Significant New Use Rule for Asbestos.

9. U.S. Geological Survey. (USGS, 2018). Mineral Commodity Summaries 2018. Washington, DC: U.S. Department of the Interior. Retrieved from [HYPERLINK "https://minerals.usgs.gov/minerals/pubs/mcs/2018/mcs2018.pdf"].

10. U.S. Geological Survey. (USGS, 2017). Mineral Commodity Summaries: Asbestos. Retrieved from [HYPERLINK "https://minerals.usgs.gov/minerals/pubs/commodity/asbestos/mcs-2017-asbes.pdf"].

11. U.S. Customs and Border Protection. (2017). *Automated Commercial Environment System (ACE).*

12. National Research Council. (NRC, 2006). Asbestos: Selected cancers. Institute of Medicine (US) Committee on Asbestos: Selected Health Effects. Washington, DC: The National Academies Press.

13. National Research Council. (NRC, 1983). Drinking Water and Health. Washington, DC: Safe Drinking Water Committee, Board on Toxicology and Environmental Health Hazards. Retrieved from [HYPERLINK

"http://dx.doi.org/10.17226/326"].

14. U.S. Environmental Protection Agency. (EPA, 1980). Ambient water quality criteria for asbestos [EPA Report]. (EPA/440/5-80/022). Washington, DC.

15. Anderson, P. H. and Farino, W. J. (1982). Analysis of Fiber Release from Certain Asbestos Products. Draft Final Report. Prepared by GCA Corporation for the U.S. Environmental Protection Agency. Retrieved from [HYPERLINK "https://nepis.epa.gov/Exe/ZyPDF.cgi/9101PBZ6.PDF?Dockey=9101PBZ6.PDF"].

16. 40 CFR Part 61, Subpart M, Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP).

17. Virta, R. (2011). Asbestos. Kirk-Othmer Encyclopedia of Chemical Technology. Retrieved from [HYPERLINK "http://onlinelibrary.wiley.com/doi/10.1002/0471238961.0119020510151209.a01.pub3/pdf"].

18. U.S. Environmental Protection Agency. (EPA, 1984). Significant New Uses of Chemical Substances; Certain Chemicals. 49 FR 35014, September 5, 1984 (FRL-2541-8).

19. U.S. Environmental Protection Agency. (EPA, 2013). Understanding the Costs Associated with Eliminating Exemptions for Articles in SNURs. May 1, 2013.

20. U.S. Environmental Protection Agency. (EPA, 1989). Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products: Final Report: Volume III. (5601989ICF001). Washington, DC: Office of Toxic Substances, U.S. Environmental Protection Agency.

XIV. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at

[HYPERLINK "http://www2.epa.gov/laws-regulations/laws-and-executive-orders"].

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is not expected to be a regulatory action subject to Executive Order 13771 (82 FR 9339, February 3, 2017), because this action is not a significant regulatory action under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA, 44 U.S.C. 3501 *et seq*. Burden is defined in 5 CFR 1320.3(b). The information collection activities associated with existing chemical SNURs are already approved under OMB control number 2070-0038 (EPA ICR No. 1188); and the information collection activities associated with export notifications are already approved under OMB control number 2070-0030 (EPA ICR No. 0795). If an entity were to submit a SNUN to the Agency, the burden is estimated to be approximately 100 hours per response (slightly less for submitters who have already registered to use the electronic submission system).

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information that requires OMB approval under the PRA, unless it has been approved by OMB and displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in Title 40 of the CFR, after appearing in the

Federal Register, are listed in 40 CFR, part 9, and included on the related collection instrument, or form, as applicable.

D. Regulatory Flexibility Act (RFA)

Pursuant to section 605(b) of the RFA, 5 U.S.C. 601 *et seq.*, I certify that promulgation of this SNUR would not have a significant economic impact on a substantial number of small entities. The rationale supporting this conclusion is as follows.

A SNUR applies to any person (including small or large entities) who intends to engage in any activity described in the rule as a "significant new use." By definition of the word "new" and based on all information currently available to EPA, it appears that no small or large entities presently engage in such activities. Since this proposed SNUR will require a person who intends to engage in such activity in the future to first notify EPA by submitting a SNUN, no economic impact will occur unless someone files a SNUN to pursue a significant new use in the future or forgoes profits by avoiding or delaying the significant new use. Although some small entities may decide to conduct such activities in the future, EPA cannot presently determine how many, if any, there may be. However, EPA's experience to date is that, in response to the promulgation of SNURs covering over 1,000 chemical substances, the Agency receives only a handful of notices per year. During the six-year period from 2005-2010, only three submitters self-identified as small in their SNUN submissions (Ref. 8). EPA believes the cost of submitting a SNUN is relatively small compared to the cost of developing and marketing a chemical new to a firm or marketing a new use of the chemical and that the requirement to submit a SNUN generally does not have a significant economic impact.

Therefore, EPA believes that the potential economic impact of complying with this proposed SNUR is not expected to be significant or adversely impact a substantial number of small entities. In a SNUR that published as a final rule on August 8, 1997 (62 FR 42690) (FRL-5735-4), the Agency presented its general determination that proposed and final SNURs are not expected to have a significant economic impact on a substantial number of small entities.

E. Unfunded Mandates Reform Act (UMRA)

Based on EPA's experience with proposing and finalizing SNURs, State, local, and Tribal governments have not been impacted by these rulemakings, and EPA does not have any reason to believe that any State, local, or Tribal government would be impacted by this rulemaking. As such, the requirements of sections 202, 203, 204, or 205 of UMRA, 2 U.S.C. 1531-1538, do not apply to this action.

F. Executive Order 13132: Federalism

This action will not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it will not have substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because it will not have any effect on tribal governments, on the relationship between the Federal Government and the Indian tribes, or on the distribution of power and responsibilities between the Federal Government and

Indian tribes.

H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997), because this action does not address environmental health or safety risks, and EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order.

I. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have any effect on energy supply, distribution, or use.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve any technical standards, and is therefore not subject to considerations under section 12(d) of NTTAA, 15 U.S.C. 272 note.

K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

This action will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). This action does not affect the level of protection provided to human health or the environment.

List of Subjects in 40 CFR Part 721

Environmental protection, Chemicals, Hazardous substances, Reporting and recordkeeping requirements, Asbestos.

Dated: _____

_____

Jeffery T. Morris,

Director, Office of Pollution Prevention and Toxics.

Therefore, it is proposed that 40 CFR chapter I be amended as follows:

PART 721--[AMENDED]

1. The authority citation for part 721 continues to read as follows:

Authority: 15 U.S.C. 2604, 2607, and 2625(c).

2. Add the following section:

§ 721.11095 Asbestos.

(a) *Chemical substance and significant new use subject to reporting*. (1) The chemical substance identified as asbestos (as defined by 15 U.S.C. 2642(3) as the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite) is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: manufacturing (including importing) or processing for any of the following uses:

i. Arc chutes;

ii. Beater-add gaskets;

iii. Extruded sealant tape and other tape;

iv. Filler for acetylene cylinders;

v. High grade electrical paper;

vi. Millboard;

vii. Missile liner;

viii. Adhesives, sealants, roof and non-roof coatings;

ix. Pipeline wrap;

x. Reinforced plastics;

xi. Roofing felt;

xii. Separators in fuel cells and batteries;

xiii. Vinyl-asbestos floor tile; or

xiv. Other building products (other than cement products).

(b) *Specific requirements*. (1) Section 721.45(f) does not apply to this section. A person who intends to manufacture (including import) or process the substance identified in paragraph (a)(1) for the significant new use identified in (a)(2) of this section as part of an article is subject to the notification provisions of § 721.25.

(2) [Reserved]

Prepublication Copy Notice:

The Director of EPA's Office of Pollution Prevention and Toxics signed the following *Federal Register* document on May 31, 2018:

Title: Proposed Rule; Asbestos; Significant New Use Rule (RIN 2070-AK45)

FRL: 9978-76

Docket No.: EPA-HQ-OPPT-2018-0159

This is a **prepublication version** of the document that EPA is submitting for publication in the *Federal Register*. While the Agency has taken steps to ensure the accuracy of this prepublication version of the document, **it is not the official version** of the document for purposes of public comment or judicial review. Please refer to the official version of the document that will appear in a forthcoming *Federal Register* publication.

Once the official version of the document publishes in the *Federal Register*, the prepublication version of the document posted on the agency's internet will be replaced with a link to the document that appears in the *Federal Register* publication. At that time, you will also be able to access the on-line docket for this *Federal Register* document at *http://www.regulations.gov*.

For further information about the docket and, if applicable, instructions for commenting, please consult the ADDRESSES section in the front of the *Federal Register* document.

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BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 721

[EPA-HQ-OPPT-2018-0159; FRL-9978-76]

RIN 2070–AK45

Asbestos; Significant New Use Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Under the Toxic Substances Control Act (TSCA), EPA is proposing a significant new use rule (SNUR) for asbestos as defined under the Asbestos Hazard Emergency Response Act. The proposed significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for certain uses identified by EPA as no longer ongoing. The Agency has found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement). Persons subject to the SNUR would be required to notify EPA at least 90 days before commencing any manufacturing (including importing) or processing of asbestos (including as part of an article) for a significant new use. The required notification initiates EPA's evaluation of the conditions of use associated with the intended use within the applicable review period. Manufacturing (including

importing) and processing (including as part of an article) for the significant new use may not commence until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

DATES: Comments must be received on or before [*insert date* 60 *days after date of publication in the* **Federal Register**].

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPPT-2018-0159, by one of the following methods:

• *Federal eRulemaking Portal*: *http://www.regulations.gov*. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

• *Mail*: Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., Washington, DC 20460-0001.

• *Hand Delivery*: To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html*.

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets*.

FOR FURTHER INFORMATION CONTACT: *For technical information contact:* Robert Courtnage, National Program Chemicals Division (Mail Code 7404T), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania

Ave., NW., Washington, DC 20460-0001; telephone number: (202) 566-1081; email address: *courtnage.robert@epa.gov*.

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554-1404; email address: *TSCA-Hotline@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

You may be potentially affected by this action if you manufacture (including import), process, or distribute in commerce asbestos as defined by TSCA Title II, Section 202 (15 U.S.C. 2642) (including as part of an article). The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Construction (NAICS code 23)
- Manufacturing (NAICS codes 31 – 33)
- Wholesale Trade (NAICS code 42)
- Transportation (NAICS code 48)

This action may also affect certain entities through pre-existing import certification and export notification rules under TSCA (15 U.S.C.2601 *et seq.*). Persons who import or process any chemical substance governed by a final SNUR are subject to the TSCA section 13 (15 U.S.C. 2612) import certification requirements and the corresponding regulations at 19 CFR 12.118 through 12.127 (see also 19 CFR 127.28).

Those persons must certify that the shipment of the chemical substance complies with all applicable rules and orders under TSCA, including any SNUR requirements. The EPA policy in support of import certification appears at 40 CFR part 707, subpart B.

In addition, asbestos, as defined in this proposed rule, is already subject to TSCA section 6(a) (40 CFR part 763, subparts G and I) rules that trigger the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b); see also 40 CFR 721.20). Any person who exports or intends to export asbestos must comply with the export notification requirements in 40 CFR part 707, subpart D; however, although EPA is proposing to make inapplicable the exemption at 40 CFR 721.45(f) for persons who import or process any asbestos as part of an article in a category listed in Table 2, the Agency is not proposing to require export notification for articles containing asbestos.

If you have any questions regarding the applicability of this action to a particular entity, consult the technical information contact listed under **FOR FURTHER INFORMATION CONTACT**.

B. What Is the Agency's Authority for Taking this Action?

Section 5(a)(2) of TSCA (15 U.S.C. 2604(a)(2)) authorizes EPA to determine that a use of a chemical substance is a "significant new use." EPA must make this determination by rule after considering all relevant factors, including those listed in TSCA section 5(a)(2) (see Unit IV). Once EPA determines that a use of a chemical substance is a significant new use, TSCA section 5(a)(1) requires persons to submit a significant new use notice (SNUN) to EPA at least 90 days before they manufacture (including import) or process the chemical substance for that use (15 U.S.C. 2604(a)(1)(B)(i)). TSCA further prohibits such manufacturing (including importing) or

processing from commencing until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination (15 U.S.C. 2604(a)(1)(B)(ii)). As described in Unit V., the general SNUR provisions are found at 40 CFR part 721, subpart A.

C. What Action Is the Agency Taking?

EPA is proposing a SNUR for asbestos, using the definition in TSCA Title II, Section 202, which defines asbestos as the "asbestiform varieties of six fiber types – chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." The proposed significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for certain uses no longer ongoing. The Agency found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement).

The Frank R. Lautenberg Chemical Safety for the 21st Century Act (Pub. L. 114-182, 130 Stat. 448) amended TSCA in June 2016. The new law includes statutory requirements related to the risk evaluations of conditions of use for existing chemicals. Based on the 2014 update of EPA's TSCA Work Plan for Chemical Assessments, in December of 2016, EPA designated asbestos as one of the first 10 chemical substances subject to the Agency's initial chemical risk evaluations (81 FR 91927), as required by

TSCA section 6(b)(2)(A) (15 U.S.C. 2605(b)(2)(A)).

EPA is separately conducting a risk evaluation of asbestos under its conditions of use, pursuant to TSCA section 6(b)(4)(A). Through scoping and subsequent research for the asbestos risk evaluation, EPA identified several conditions of use of asbestos to include in the risk evaluation. Those include imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production and several imported chrysotile asbestos-containing materials, including sheet gaskets for use in titanium dioxide chemical production, brake blocks for use in oil drilling, aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products. This proposed significant new rule would not identify as significant new uses those uses that EPA believes are currently ongoing. EPA is requesting public comment on this proposal and welcomes specific and verifiable documentation of any ongoing uses not identified by the Agency as well as additional uses not identified as no longer ongoing. This proposed SNUR would require persons that intend to manufacture (including import) or process any form of asbestos as defined under Title II of TSCA (including as part of an article) for a significant new use, consistent with the requirements at 40 CFR 721.25, to notify EPA at least 90 days before commencing such manufacturing (including importing) or processing. This proposed SNUR would preclude the commencement of such manufacturing (including importing) or processing until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

D. Why Is the Agency Taking this Action?

This proposed SNUR is necessary to ensure that EPA receives timely advance notice of any future manufacturing (including importing) or processing of asbestos (including as part of an article) for new uses that may produce changes in human and environmental exposures, and to ensure that an appropriate determination (relevant to the risks associated with such manufacturing (including importing), processing, and use) has been issued prior to the commencement of such manufacturing (including importing) or processing. Today's action is furthermore necessary to ensure that manufacturing (including importing) or processing for the significant new use cannot proceed until EPA has responded to the circumstances by taking the required actions under Sections 5(e) or 5(f) of TSCA in the event that EPA determines any of the following: (1) that the significant new use presents an unreasonable risk under the conditions of use (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); (2) that the information available to EPA is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use; (3) that, in the absence of sufficient information, the manufacturing (including importing), processing, distribution in commerce, use, or disposal of the substance, or any combination of such activities, may present an unreasonable risk (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); or (4) that there is substantial production and sufficient potential for environmental release or human exposure (as defined in TSCA section 5(a)(3)(B)(ii)(II)).

There is a strong causal association between asbestos exposure and lung cancer

and mesotheliomas (tumors arising from the thin membranes that line the chest (thoracic) and abdominal cavities and surround internal organs) (Ref. 1; Ref. 2; Ref. 3; Ref. 4; Ref. 5; Ref. 6). In addition, other cancers, as well as non-cancer effects, such as respiratory and immune effects, have been associated with asbestos exposure (Ref. 7).

Agency research conducted in support of the TSCA risk evaluation of asbestos revealed that the use of asbestos has declined dramatically in the United States since the 1970s when asbestos use was at its peak. EPA is taking action in this proposed rule to ensure that EPA receives timely advance notice and makes an appropriate determination prior to the commencement of manufacturing (including importing) or processing for any significant new use of asbestos (including as part of an article) as identified in Table 2. The rationale and objectives for this proposed SNUR are explained in detail in Unit III.

E. What are the Estimated Incremental Impacts of this Action?

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers (including importers) and processors of the chemical substance included in this proposed rule. This Economic Analysis (Ref. 8), which is available in the docket, is discussed in Unit IX. and is briefly summarized here.

In the event that a SNUN is submitted, costs are estimated to be less than $10,000 per SNUN submission for large business submitters and $8,000 for small business submitters. In addition, for persons exporting a substance that is the subject of a SNUR, a one-time notice to EPA must be provided for the first export or intended export to a particular country, which is estimated to be approximately $96 per notification. However, asbestos is already subject to TSCA section 6(a) rules (40 CFR part 763, subparts G and I) that trigger the export notification provisions of TSCA section 12(b) (15 U.S.C.

2611(b); see also 40 CFR 721.20), and the Agency is not proposing to require export notifications for articles containing asbestos as articles are generally excluded from the TSCA section 12(b) export notification requirements. Therefore, EPA assumes no additional costs under TSCA section 12(b) for this proposed rule.

The proposed rule may also affect firms that plan to import or process articles that may be subject to the SNUR. Although there are no specific requirements in the rule for these firms, they may choose to undertake some activity to assure themselves they are not undertaking a new use. In the accompanying Economic Analysis for this proposed SNUR (Ref. 8), example steps (and their respective costs) that an importer or processor might take to identify asbestos in articles are provided. These steps can include gathering information through agreements with suppliers, declarations through databases or surveys, or use of a third-party certification system. Additionally, importers may require suppliers to provide certificates of testing analysis of the products or perform their own laboratory testing of certain articles. EPA is unable to predict, however, what, if any, particular steps an importer might take; thus, potential total costs were not estimated.

II. Chemical Substances Subject to this Proposed Rule and Associated Background Information

A. What Chemicals Are Included in the Proposed SNUR?

This proposed SNUR applies to asbestos, using the definition in TSCA Title II (added to TSCA in 1986), Section 202, which defines asbestos as the "asbestiform varieties of six fiber types – chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." This proposed SNUR applies to the manufacturing (including importing) or processing of asbestos (including

as part of an article) for certain uses no longer ongoing. EPA found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement). Under this proposed SNUR, the exemption at 40 CFR 721.45(f) would not apply to persons who import or process asbestos as part of an article (which includes as a component of an article) because there is reasonable potential for exposure to asbestos if the substance is incorporated into articles and then imported or processed. However, in accordance with the impurity exclusion at 40 CFR 721.45(d), this proposed significant new use rule would not apply to persons who manufacture (including import) or process asbestos (including as part of an article) only as an impurity.

B. What Are the Production Volumes and Uses of Asbestos?

Asbestos has not been mined or otherwise produced in the United States since 2002; therefore, any new raw bulk asbestos used in the United States is imported. According to the U.S. Geological Survey (USGS), approximately 300 metric tons of raw bulk asbestos was imported into the United States in 2017 (Ref. 9). Chrysotile is the only form of raw bulk asbestos currently imported, and the chlor-alkali industry is the only known importer (Ref. 9). EPA did not identify any domestic entity that uses raw bulk asbestos other than the chlor-alkali industry, which uses chrysotile asbestos to fabricate diaphragms for use in chlorine and sodium hydroxide production.

In an effort to identify national import volumes and conditions of use for the asbestos risk evaluation under TSCA section 6(b)(4)(A), EPA searched a number of available data sources including EPA's Chemical Data Reporting (CDR) database, USGS's Mineral Commodities Summary and the Minerals Yearbook, the U.S. International Trade Commission's Dataweb, the U.S. Customs and Border Protection's Automated Commercial Environment (ACE) System, and the *Use and Market Profile for Asbestos* (EPA-HQ-OPPT-2016-0736-0085). Based on this search, EPA published a preliminary list of information and sources related to asbestos conditions of use (see *Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos*, EPA-HQ-OPPT-2016-0736-0005) prior to a February 2017 public meeting on the scoping efforts for the risk evaluation convened to solicit public comment. EPA also convened meetings with companies, associated industry groups, chemical users and other stakeholders to aid in identifying conditions of use and verifying conditions of use identified by EPA. On June 22, 2017, EPA published the *Scope of the Risk Evaluation for Asbestos* (EPA-HQ-OPPT-2016-0736-0086), which further provided opportunity for the public and private sector to identify conditions of use of asbestos in the United States.

During the public comment period for the *Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos* (EPA-HQ-OPPT-2016-0736-0005), one company identified the use of asbestos-containing gaskets, which are imported, for use during the production of titanium dioxide. During stakeholder discussions another company confirmed importing and distributing brake blocks for use in drawworks by the oil industry. EPA believes that aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement

products, and woven products containing asbestos could also be imported, as reported by USGS (Ref. 10) and also appear in data from ACE (Ref. 11); however, the volume of products and the quantity of asbestos within imported products is unknown. ACE is not a publicly accessible database because it contains information that is protected under the provisions of Freedom of Information Act (5 U.S.C. 552), the Privacy Act (5 U.S.C. 552a), and the Trade Secrets Act (18 U.S.C. 1905), and the information in ACE related to importer identity cannot be released.

C. What Are the Potential Health Effects of Asbestos?

Asbestos was listed as a known human carcinogen in the National Toxicology Program's *First Annual Report on Carcinogens* in 1980 (Ref. 1). In 1988, EPA assessed the health hazards and effects caused by exposure to asbestos under the Integrated Risk Information System (IRIS) program, and determined that asbestos exposure can lead to lung cancer and mesotheliomas (tumors arising from the thin membranes that line internal organs) (Ref. 2). Many authorities have established that there is causal association between asbestos and lung cancer and mesotheliomas (Ref. 1; Ref. 3; Ref. 4). EPA also noted in the *Scope of the Risk Evaluation for Asbestos* that there is a causal association between exposure to asbestos and cancer of the larynx and cancer of the ovary (Ref. 4). There is also suggestive evidence of a positive association between asbestos and cancer of the pharynx (Ref. 4; Ref. 12), stomach (Ref. 3; Ref. 4), and colorectum (Ref. 1; Ref. 3; Ref. 4; Ref. 12; Ref. 13; Ref. 14). All types of asbestos fibers have been reported to cause mesothelioma. (Ref. 4).

Increases in lung cancer mortality have been reported in both workers and residents exposed to various asbestos fiber types as well as fiber mixtures (Ref. 4). There

is evidence in in-vitro, animal, and human studies that asbestos is genotoxic, meaning asbestos can damage an organism's genetic material (Ref. 3). There is also evidence that asbestos exposure is associated with adverse respiratory system effects, such as asbestosis and immunotoxicity (Ref. 3; Ref. 7).

D. What Are the Potential Routes and Sources of Exposure to Asbestos

The greatest risk of exposure to asbestos occurs when the substance is in a friable state, meaning the fibers can be crumbled, pulverized or reduced to a powder under hand pressure (Ref. 3). During use and over time, non-friable asbestos has the potential to become friable (Ref. 3). For example, testing has shown that non-friable asbestos-containing material can become friable during use such as cutting, crumbling, and tearing, and as a result of such use, asbestos fibers can be released into the air (Ref. 15). Similarly, non-friable asbestos-containing building materials can release fibers if disturbed during building repair or demolition (Ref. 16). Exposures to workers, consumers and the general population, as well as environmental receptors, may occur from industrial releases and use of asbestos-containing products. Based on EPA's research conducted during the early stages of the TSCA risk evaluation, most of the ongoing uses of asbestos pertain to industrial and commercial uses (Ref. 7).

The primary exposure route for asbestos is inhalation. Asbestos fibers can be released into the air during processing of raw bulk asbestos and asbestos-containing products. Weathering and the disturbance and/or degradation of asbestos-containing products can also cause asbestos fibers to be suspended in air (Ref. 3). Fibers can then enter the lungs through inhalation. Exposures to asbestos can potentially occur via oral and dermal routes; however, EPA anticipates that the most likely exposure route is

inhalation.

III. Rationale and Objectives

A. Rationale

EPA is concerned about the potential for adverse health effects of asbestos based on established sound scientific data indicating that asbestos is a known human carcinogen. Asbestos was listed as a human carcinogen in the National Toxicology Program's *First Annual Report on Carcinogens* in 1980 (Ref. 1).

Asbestos, in particular chrysotile asbestos, has several unique properties, including low electrical conductivity while maintaining high tensile strength, high friction coefficient, and high resistance to heat (Ref. 17). These properties made asbestos ideal for use in friction materials (e.g. brakes), insulation (e.g. sound, heat, and electrical), and building materials (e.g. cement pipes, roofing compounds, flooring) over the past century. However, the use of asbestos has declined dramatically due to health concerns and consumer preference (Ref. 17), which has led to the elimination of some exposure scenarios associated with such uses. According to USGS, in 1973, national consumption, including manufacturing/importing and processing, of raw bulk asbestos peaked around 800,000 metric tons and has since fallen approximately 99 percent to between 300 and 800 metric tons in recent years (Ref. 9). Today, most manufactured products in the United States are now asbestos-free (Ref. 17).

In 1989, EPA published a final rule *Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions* (54 FR 29460, July 12, 1989) (FRL-3476-2), which was intended "to prohibit, at staged intervals, the future manufacture, importation, processing and distribution in commerce of asbestos in almost

all products, as identified in the rule . . ." and to "reduce the unreasonable risks presented to human health by exposure to asbestos during activities involving these products." The 1989 final rule applied to the asbestos product categories identified in the *Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products,* which was conducted in support of the rule (Ref. 20). However, the ban against most of the asbestos product categories was overturned by the Fifth Circuit Court of Appeals in 1991. In addition to the asbestos products that remain banned after the court ruling, which are identified in Table 1 below, any new use of asbestos was also banned. The prohibition on any new uses of asbestos is for uses initiated for the first time after August 25, 1989. As a point of clarification, in this proposed rulemaking, a significant new use of asbestos addresses multiple uses that were initiated prior to August 25, 1989, for which manufacturing and processing are no longer ongoing in the United States.

Table 1: Asbestos Containing Product Categories Banned Under TSCA Section 6

Product Category	**Definition (40 CFR 763.163)**
Corrugated Paper	Corrugated paper means an asbestos-containing product made of corrugated paper, which is often cemented to a flat backing, may be laminated with foils or other materials, and has a corrugated surface. Major applications of asbestos corrugated paper include: thermal insulation for pipe coverings; block insulation; panel insulation in elevators; insulation in appliances; and insulation in low-pressure steam, hot water, and process lines.
Rollboard	Rollboard means an asbestos-containing product made of paper that is produced in a continuous sheet, is flexible, and is rolled to

	achieve a desired thickness. Asbestos rollboard consists of two sheets of asbestos paper laminated together. Major applications of this product include: office partitioning; garage paneling; linings for stoves and electric switch boxes; and fire-proofing agent for security boxes, safes, and files.
Commercial Paper	Commercial paper means an asbestos-containing product that is made of paper intended for use as general insulation paper or muffler paper. Major applications of commercial papers are insulation against fire, heat transfer, and corrosion in circumstances that require a thin, but durable, barrier.
Specialty Paper	Specialty paper means an asbestos-containing product that is made of paper intended for use as filters for beverages or other fluids or as paper fill for cooling towers. Cooling tower fill consists of asbestos paper that is used as a cooling agent for liquids from industrial processes and air conditioning systems.
Flooring Felt	Flooring felt means an asbestos-containing product that is made of paper felt intended for use as an underlayer for floor coverings, or to be bonded to the underside of vinyl sheet flooring.
New Uses*	The commercial uses of asbestos not identified in §763.165 the manufacture, importation or processing of which would be initiated for the first time after August 25, 1989.
**Note: a "new use" as defined in 40 CFR 763.163 is distinct from a significant new*	

use per TSCA section 5(a)(2), which is explained for the purposes of this proposed rule in Table 2.

As part of the information gathering activity associated with the current asbestos risk evaluation, the Agency researched market availability for the asbestos product categories subject to the 1989 asbestos ban and phase-out rule that was later overturned. EPA identified several asbestos product categories where manufacturing (including importing) and processing for the use is no longer ongoing. Through further refinement of the *Scope of the Risk Evaluation for Asbestos*, the Agency determined that asbestos-containing cement products (e.g., pipe, shingles and replacement parts) are the only condition of use of asbestos in building materials; therefore, this proposed SNUR also applies to all asbestos-containing building materials other than asbestos cement products. These product categories and descriptions are listed in Table 2, and manufacturing and processing for these product categories are significant new uses subject to this proposed rulemaking. The product category descriptions are based on the product category descriptions presented in the *Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products* for the 1989 final rule (Ref. 20) and may not be all-encompassing.

Table 2: Product Categories of Proposed Significant New Uses of Asbestos

Product Category	Description of the Product Category
Arc Chutes	Ceramic arc chutes containing asbestos were used to guide electric arcs in motor starter units in electric generating plants.

Beater-Add Gaskets	Asbestos fibers were incorporated within various elastomeric binders and other fillers to form the beater-add paper. These products were used extensively for internal combustion applications and for the sealing component of spiral wound gaskets. Gaskets were used to seal one compartment of a device from another in non-dynamic applications such as engine and exhaust manifolds.
Extruded Sealant Tape and Other Tape	Sealant tape was made from a semi-liquid mixture of butyl rubber and asbestos. On exposure to air, the sealant solidified forming a rubber tape about an inch wide and an eighth of an inch thick. The tape acted as a gasket for sealing building windows, automotive windshields, and mobile home windows. It was also used in the manufacture of parts for the aerospace industry and in the manufacture of insulated glass.
Filler for Acetylene Cylinders	Asbestos was used to produce a sponge-like filler, which held the liquefied acetylene gas (acetone) in suspension in the steel cylinder and puled the acetone up through the tank as the gas was released through the oxyacetylene torch. The torch was used to weld or cut metal and sometimes used as an illuminant gas. The filler also acted as an insulator that offered fire protection in case the oxidation of the acetylene became uncontrollable.
High-Grade Electrical Paper	The major use of asbestos electrical paper was insulation for high temperature, low voltage applications such as in motors, generators, transformers, switch gears, and other heavy electrical apparatuses.

Millboard	Asbestos millboard was essentially a heavy cardboard product that was used for gasketing, insulation, fireproofing, and resistance against corrosion and rot. Millboard was used in many industrial applications to include linings in boilers, kilns, and foundries; insulation in glass tank crowns, melters, refiners, and sidewalls in the glass industry; linings for troughs and covers in the aluminum, marine, and aircraft industries; and thermal protection in circuit breakers in the electrical industry. In addition, thin millboard was inserted between metal to produce gaskets. Commercial applications for millboard included fireproof linings for safes, dry-cleaning machines, and incinerators.
Missile Liner	A missile liner was an asbestos and rubber compound used to insulate the outer casing of the rocket from the intense heat generated in the rocket motor while the rocket fuel was burned. Rockets and rocket boosters were used to propel a number of objects including military weapons and the space shuttle.
Adhesives, Sealants, and Roof and Non-Roof Coatings	The automobile industry historically used asbestos in a wide variety of adhesive, sealant, and coating applications. The aerospace industry used asbestos in extremely specialized applications such as firewall sealants and epoxy adhesives. Non-roof coatings were used to prevent corrosion (e.g. as vehicle undercoatings and underground pipe coatings). Roof coatings were used to repair and patch roofs, seal around projections such as chimneys and vent pipes, and bond horizontal and vertical surfaces.

Pipeline Wrap	Pipeline wrap was an asbestos felt product primarily used by the oil and gas industry for coating its pipelines. Asbestos pipeline wrap was also used in the coal tar enamel method of coating pipes, some above-ground applications (such as for special piping in cooling towers), and was also used by the chemical industry for underground hot water and steam piping.
Reinforced Plastics	Asbestos-reinforced plastics were used for electro-mechanical parts in the automotive and appliance industries and as high-performance plastics for the aerospace industry. Asbestos-reinforced plastic was typically a mixture of some type of plastic resin (usually phenolic or epoxy), a general filler (often chalk or limestone), and raw asbestos fiber.
Roofing Felt	Asbestos roofing felt was single or multi-layered grade and used for built-up roofing. Asbestos was used in roofing felts because of its dimensional stability and resistance to rot, fire, and heat.
Separators in Fuel Cells and Batteries	In very specialized aerospace applications, asbestos functioned as an insulator and separator between the negative and positive terminals of a fuel cell/battery.
Vinyl-Asbestos Floor Tile	Vinyl-asbestos floor tile was used in commercial, residential, and institutional buildings in heavy traffic areas such as supermarkets, department stores, commercial plants, kitchens, and "pivot points" – entry ways and areas around elevators
Any Other Building	Examples include insulation, plasters, mastics, textured paints (e.g.,

Materials (other than cement)*	simulates stucco), and block filler paints (e.g., for coating masonry).
**Note: Not a product category described in the same terms in the Regulatory Impact Analysis; this broader product category is used generally to describe a number of specific product categories identified during the TSCA section 6 risk evaluation process.*	

As part of the current asbestos risk evaluation process, the Agency identified conditions of use to be considered under the TSCA risk evaluation. Those include: imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production and several imported chrysotile asbestos-containing materials including sheet gaskets for use in titanium dioxide chemical production, brake blocks for use in oil drilling, aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products. These ongoing uses identified by EPA are not among the significant new uses identified in this proposal and therefore would not require a significant new use notification submission to the Agency. EPA requests comment regarding any ongoing uses not identified by the Agency and welcomes specific and verifiable documentation. EPA also requests comment on additional uses not identified as no longer ongoing.

In the absence of this proposed rule, the importing or processing of asbestos (including as part of an article) for the significant new uses proposed in this rule may begin at any time, without prior notice to EPA. Thus, EPA is concerned that commencement of the manufacturing (including importing) or processing for the significant new uses of asbestos identified in Table 2 could significantly increase the

volume of manufacturing (including importing) and processing of asbestos as well as the magnitude and duration of exposure to humans over that which would otherwise exist currently. EPA has preliminarily concluded that action on this chemical substance is warranted and therefore proposes that any manufacturing (including importing) or processing of asbestos (including as part of an article), using the definition under Title II of TSCA, for any use identified in Table 2 would be a significant new use.

Consistent with EPA's past practice for issuing SNURs under TSCA section 5(a)(2), EPA's decision to propose a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use. If a person decides to begin manufacturing (including importing) or processing asbestos (including as part of an article) for a use identified in Table 2, the notice to EPA allows the Agency to evaluate the use according to the specific parameters and circumstances surrounding the conditions of use.

B. Rationale for Making Inapplicable the Exemption at 40 CFR 721.45(f) for Persons who Import or Process Asbestos

Chemical substances that are part of an article may still result in exposure if the chemical substance has certain physical-chemical properties – as in the case of asbestos, fibers can degrade with use and become friable over time where human exposures can occur leading to increased risks for disease (Ref. 3; Ref. 15; Ref. 16). During use and over time, non-friable asbestos has the potential to become friable (Ref. 3). For example, testing has shown that non-friable asbestos-containing material can become friable during use such as cutting, crumbling, and tearing, and as a result of such use, asbestos fibers can be released into the air (Ref. 15). Similarly, non-friable asbestos-containing building

materials can release fibers if disturbed during building repair or demolition (Ref. 16). Therefore, EPA is proposing to make inapplicable the exemption at 40 CFR 721.45(f) for persons who import or process any asbestos as part of an article for the proposed significant new uses, which are identified in Table 2. A person who imports or processes asbestos (including as part of an article) for a proposed significant new use identified in Table 2 would be subject to the significant new use notification requirements in this proposed rule. No person would be able to begin importing or processing asbestos (including as part of an article) for a proposed significant new use without first submitting a SNUN to EPA and until the Agency has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

As requested in Unit XII., EPA asks for comment on the Agency's understanding of ongoing uses. When submitting a comment to the Agency, EPA requests specific and verifiable information that provides evidence of ongoing uses beyond those identified in this proposed rule.

C. Objectives

Based on the considerations in Unit III.A., EPA wants to achieve the following objectives with regard to the significant new use of asbestos (including as part of an article) as designated in this proposed rule:

1. EPA would receive notice of any person's intent to manufacture (including import) or process asbestos (including as part of an article) for the described significant new use before that activity begins.

2. EPA would have an opportunity to review and evaluate data submitted in a

SNUN before the notice submitter begins manufacturing (including importing) or processing asbestos (including as part of an article) for the described significant new use.

3. EPA would be able to either determine that the significant new use is not likely to present an unreasonable risk, or take necessary regulatory action associated with any other determination before the described significant new use of asbestos (including as part of an article) occurs.

IV. Significant New Use Determination

Section 5(a)(2) of TSCA states that EPA's determination that a use of a chemical substance is a significant new use must be made after consideration of all relevant factors including:

1. The projected volume of manufacturing and processing of a chemical substance.

2. The extent to which a use changes the type or form of exposure of human beings or the environment to a chemical substance.

3. The extent to which a use increases the magnitude and duration of exposure of human beings or the environment to a chemical substance.

4. The reasonably anticipated manner and methods of manufacturing, processing, distribution in commerce, and disposal of a chemical substance.

In addition to these factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

Both federal and state environmental protection agencies and occupational safety and health organizations provide existing regulation pertaining to certain aspects of the manufacturing (including importing), processing, use, and/or disposal of asbestos in order

to protect consumers, workers, and the environment. EPA believes the significant new uses of asbestos identified in Table 2 could increase the volume of manufacturing (including importing) and processing of asbestos, as well as the duration and magnitude of human and environmental exposure to the substance, reverse the declining trend of national import volumes of the substance, and reintroduce exposure scenarios that have become obsolete over the past several decades. It is imperative that EPA be notified of any intended significant new use of asbestos identified in Table 2 and be provided the opportunity to evaluate such proposed new use. Once a SNUR is finalized, failure to notify EPA and file a SNUN prior to manufacturing or processing for the significant new uses would constitute a violation of TSCA and would be subject to penalties, accordingly.

To determine what would constitute a significant new use of asbestos as discussed in this unit, EPA considered relevant information about the toxicity or expected toxicity of the substance, likely human exposures and environmental releases associated with possible uses, and the four factors listed in Section 5(a)(2) of TSCA. In addition to these factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

The article exemption at 40 CFR 721.45(f) is based on an assumption that people and the environment will generally not be exposed to chemical substances in articles (Ref. 18). However, even when contained in an article, asbestos can become friable over time with use (Ref. 3; Ref. 15; Ref. 16). Based on this understanding, upon submission of a SNUN, EPA intends to evaluate the potential risk of exposure to human health and the environment for any proposed significant new use of asbestos (including as part of an

article). This understanding warrants making the exemption at 40 CFR 721.45(f) inapplicable to importers or processors of articles containing asbestos. Considering the potential friability of asbestos, even when incorporated in articles, and the health risks associated with exposure to asbestos, EPA proposes to affirmatively find under TSCA section 5(a)(5) that notification is justified by the reasonable potential for exposure to asbestos through the articles subject to this SNUR. EPA intends to evaluate such potential uses whether in the form of an article or not before those uses would begin for any associated risks or hazards that might exist. EPA has reason to anticipate that importing or processing asbestos as part of an article would create the potential for exposure to asbestos, and that EPA should have an opportunity to review the intended use before such use could occur. Persons subject to this proposed SNUR are required to notify EPA at least 90 days prior to commencing manufacturing (including importing) or processing of the substance for the new use. This required notification provides EPA with the opportunity to evaluate an intended significant new use of the regulated chemical substance and, if necessary, an opportunity to protect against potential unreasonable risks.

V. Applicability of General Provisions

General provisions for SNURs appear under 40 CFR part 721, subpart A. These provisions describe persons subject to the rule, recordkeeping requirements, and exemptions to reporting requirements.

Provisions relating to user fees appear at 40 CFR part 700. According to 40 CFR 721.1(c), persons subject to SNURs must comply with the same notice requirements and EPA regulatory procedures as submitters of Premanufacture Notices (PMNs) under TSCA section 5(a)(1)(A). In particular, these requirements include the information

submission requirements of TSCA sections 5(b) and 5(d)(1), the exemptions authorized by TSCA sections 5(h)(1), (h)(2), (h)(3), and (h)(5), and the regulations at 40 CFR part 720. Once EPA receives a SNUN, EPA must either determine that the significant new use is not likely to present an unreasonable risk of injury or take such regulatory action as is associated with an alternative determination before the manufacturing (including importing) or processing for the significant new use can commence. If EPA determines that the significant new use is not likely to present an unreasonable risk, EPA is required under TSCA section 5(g) to make public, and submit for publication in the **Federal Register**, a statement of EPA's finding.

VI. Applicability of Rule to Uses Occurring Before Effective Date of the Final Rule

EPA designates June 1, 2018 (the date of web posting of this proposed rule) as the cutoff date for determining whether the new use is ongoing. The objective of EPA's approach is to ensure that a person cannot defeat a SNUR by initiating a significant new use before the effective date of the final rule. In developing this proposed rule, EPA has recognized that, given EPA's general practice of posting proposed and final SNURs on its website a week or more in advance of **Federal Register** publication, this objective could be thwarted even before that publication.

Persons who begin commercial manufacturing (including importing) or processing of the chemical substance (to include importing or processing articles and components thereof containing the chemical substance) for a significant new use identified as of June 1, 2018 would have to cease any such activity upon the effective date of the final rule. To resume their activities, these persons would have to first comply with all applicable SNUR notification requirements and wait until all TSCA prerequisites

for the commencement of manufacturing (including importing) or processing have been satisfied (see **Federal Register** documents of April 24, 1990 (55 FR 17376) (FRL-3658-5) and November 28, 2016 (81 FR 85472) (FRL-9945-53) for additional information).

VII. Development and Submission of Information

EPA recognizes that TSCA section 5 does not usually require developing new information (e.g., generating test data) before submission of a SNUN; however, there is an exception: development of information is required where the chemical substance subject to the SNUR is also subject to a rule, order, or consent agreement under TSCA section 4 (see TSCA section 5(b)(1)). Also pursuant to TSCA section 4(h), which pertains to reduction of testing of vertebrate animals, EPA encourages consultation with the Agency on the use of alternative test methods and strategies (also called New Approach Methodologies or NAMs), if available, to generate any recommended test data. EPA encourages dialogue with Agency representatives to help determine how best the submitter can meet both the data needs and the objective of TSCA section 4(h).

In the absence of a TSCA section 4 test rule covering the chemical substance, persons are required to submit only information in their possession or control and to describe any other information known to or reasonably ascertainable by them (15 U.S.C. 2604(d); 40 CFR 721.25, and 40 CFR 720.50). However, as a general matter, EPA recommends that SNUN submitters include information that would permit a reasoned evaluation of risks posed by the chemical substance during its manufacturing (including importing), processing, use, distribution in commerce, or disposal. EPA encourages persons to consult with the Agency before submitting a SNUN. As part of this optional pre-notice consultation, EPA would discuss specific information it believes may be useful

in evaluating a significant new use.

Submitting a SNUN that does not itself include information sufficient to permit a reasoned evaluation may increase the likelihood that EPA will either respond with a determination that the information available to the Agency is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use or, alternatively, that in the absence of sufficient information, the manufacturing (including importing), processing, distribution in commerce, use, or disposal of the chemical substance may present an unreasonable risk of injury.

SNUN submitters should be aware that EPA will be better able to evaluate SNUNs and define the terms of any potentially necessary controls if the submitter provides detailed information on human exposure and environmental releases that may result from the significant new uses of the chemical substance.

VIII. SNUN Submissions

EPA recommends that submitters consult with the Agency prior to submitting a SNUN to discuss what information may be useful in evaluating a significant new use. Discussions with the Agency prior to submission can afford ample time to conduct any tests that might be helpful in evaluating risks posed by the substance. According to 40 CFR 721.1(c), persons submitting a SNUN must comply with the same notice requirements and EPA regulatory procedures as persons submitting a PMN, including submission of test data on health and environmental effects as described in 40 CFR 720.50. SNUNs must be submitted on EPA Form No. 7710-25, generated using e-PMN software, and submitted to the Agency in accordance with the procedures set forth in 40 CFR 721.25 and 40 CFR 720.40. E-PMN software is available electronically at

http://www.epa.gov/opptintr/newchems.

IX. Economic Analysis

A. SNUNs

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers (including importers) and processors of the chemical substance included in this proposed rule (Ref. 8). In the event that a SNUN is submitted, average costs are estimated at approximately $9,937 per SNUN submission for large business submitters and $7,537 for small business submitters. These estimates include the cost to prepare and submit the SNUN, and the payment of a user fee. Businesses that submit a SNUN would be subject to either a $2,500 user fee required by 40 CFR 700.45(b)(2)(iii), or, if they are a small business with annual sales of less than $40 million when combined with those of the parent company (if any), a reduced user fee of $100 (40 CFR 700.45(b)(1)). On February 26, 2018, EPA proposed raising the fee for SNUNs to $2,800 for small businesses and $16,000 for other businesses (83 FR 8212). Further, on November 30, 2017, EPA determined that revisions to the current small business size standards for TSCA reporting and recordkeeping requirements are warranted (82 FR 56824). Businesses that submit a SNUN are also estimated to incur average costs of $67 for rule familiarization. First time submitters will incur an average cost of $128 for Central Data Exchange (CDX) registration and associated activities. Companies manufacturing, importing, or processing asbestos or articles containing asbestos will incur an average cost of $80 for notifying their customers of SNUR regulatory activities.

The costs of submitting a SNUN will not be incurred by any company unless a

company decides to pursue a significant new use as defined in this proposed SNUR. Additionally, these estimates reflect the costs and fees as they are known at the time this rule is promulgated. EPA's complete economic analysis is available in the public docket for this proposed rule (Ref. 8).

B. Export Notification

Under Section 12(b) of TSCA and the implementing regulations at 40 CFR part 707, subpart D, exporters must notify EPA if they export or intend to export a chemical substance or mixture for which, among other things, a rule has been proposed or promulgated under TSCA section 5. As explained in Unit I., export notifications are required for asbestos, but not for articles containing asbestos. EPA is not proposing that asbestos-containing articles be subject to the export notification requirements; therefore, EPA assumes no additional costs under TSCA section 12(b) for this proposed rule.

In general, for persons exporting a substance that is the subject of a SNUR, a one-time notice to EPA must be provided for the first export or intended export to a particular country. The total costs of export notification will vary by chemical, depending on the number of required notifications (i.e., the number of countries to which the chemical is exported). While EPA is unable to make any estimate of the likely number of export notifications for the chemical covered in this proposed SNUR, as stated in the accompanying economic analysis of this proposed SNUR, the estimated cost of the export notification requirement on a per unit basis is approximately $96.

C. Import or Processing Chemical Substances as Part of an Article

In making inapplicable the exemption relating to persons that import or process certain chemical substances as part of an article, this action may affect firms that plan to

import or process types of articles that may contain the asbestos. Some firms have an understanding of the contents of the articles they import or process. However, EPA acknowledges that importers and processors of articles may have varying levels of knowledge about the chemical content of the articles that they import or process. These parties may need to become familiar with the requirements of the rule. And, while not required by the SNUR, these parties may take additional steps to determine whether the subject chemical substance is part of the articles they are considering for importing or processing. This determination may involve activities such as gathering information from suppliers along the supply chain and/or testing samples of the article itself. Costs vary across the activities chosen and the extent of familiarity a firm has regarding the articles it imports or processes. Cost ranges are presented in the Understanding the Costs Associated with Eliminating Exemptions for Articles in SNURs (Ref. 19). Based on available information, EPA believes that article importers or processors that choose to investigate their products would incur costs at the lower end of the ranges presented in the Economic Analysis. For those companies choosing to undertake actions to assess the composition of the articles they import or process, EPA expects that importers or processors would take actions that are commensurate with the company's perceived likelihood that a chemical substance might be a part of an article for the significant new uses subject to this proposed rulemaking (identified in Table 2) and the resources it has available. Example activities and their costs are provided in the accompanying Economic Analysis of this proposed rule (Ref. 8).

X. Alternatives

Before proposing this SNUR, EPA considered the following alternative regulatory

action: Promulgate a TSCA section 8(a) Reporting Rule.

Under a TSCA section 8(a) rule, EPA could, among other things, generally require persons to report information to the Agency when they intend to manufacture (including import) or process a listed chemical for a specific use or any use. However, for asbestos, the use of TSCA section 8(a) rather than SNUR authority would have several limitations. First, if EPA were to require reporting under TSCA section 8(a) instead of TSCA section 5(a), that action would not ensure that EPA receives timely advance notice of future manufacturing (including importing) or processing of asbestos (including as part of an articles and components thereof) for new uses that may produce changes in human and environmental exposures. Nor would action under 8(a) ensure that an appropriate determination (relevant to the risks of such manufacturing (including importing) or processing) has been issued prior to the commencement of such manufacturing (including importing) or processing. Furthermore, a TSCA section 8(a) rule would not ensure that manufacturing (including importing) or processing for the significant new use cannot proceed until EPA has responded to the circumstances by taking the required actions under Sections 5(e) or 5(f) of TSCA in the event that EPA determines any of the following: (1) that the significant new use presents an unreasonable risk under the conditions of use (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); (2) that the information available to EPA is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use; (3) that in the absence of sufficient information, the manufacture (including import), processing, distribution in commerce, use, or disposal of the substance, or any

combination of such activities, may present an unreasonable risk (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); or (4) that there is substantial production and sufficient potential for environmental release or human exposure (as defined in TSCA section 5(a)(3)(B)(ii)(II)).

In addition, EPA may not receive important information from small businesses, because such firms generally are exempt from TSCA section 8(a) reporting requirements (see TSCA sections 8(a)(1)(A) and 8(a)(1)(B)). In view of the level of health concerns about asbestos if used for a proposed significant new use, EPA believes that a TSCA section 8(a) rule for this substance would not meet EPA's regulatory objectives.

XI. Scientific Standards, Evidence, and Available Information

EPA has used scientific information, technical procedures, measures, methods, protocols, methodologies, and models consistent with the best available science, as applicable. These sources supply information relevant to whether a particular use would be a significant new use, based on relevant factors including those listed under TSCA section 5(a)(2). As noted in Unit III., EPA's decision to promulgate a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use.

The clarity and completeness of the data, assumptions, methods, quality assurance, and analyses employed in EPA's decision are documented, as applicable and to the extent necessary for purposes of this proposed significant new use rule, in Unit II. and in the references cited throughout the preamble of this proposed rule. EPA recognizes, based on the available information, that there is variability and uncertainty in

whether any particular significant new use would actually present an unreasonable risk. For precisely this reason, it is appropriate to secure a future notice and review process for these uses, at such time as they are known more definitively. The extent to which the various information, procedures, measures, methods, protocols, methodologies or models used in EPA's decision have been subject to independent verification or peer review is adequate to justify their use, collectively, in the record for a significant new use rule.

XII. Request for Comment

A. Do you have comments or information about ongoing uses?

EPA welcomes comment on all aspects of this proposed rule. EPA based its understanding of the use profile of this chemical on the published literature, the 2016 Chemical Data Reporting submissions, market research, review of Safety Data Sheets, and extensive research conducted during the early stages of the TSCA risk evaluation for asbestos. To confirm EPA's understanding, the Agency is requesting public comment on all aspects of this proposed rule. In providing comments on an ongoing use of asbestos, it would be helpful to provide specific information and documentation sufficient for EPA to substantiate any assertions of use.

B. What Should I Consider as I Prepare my Comments for EPA?

1. *Submitting CBI.* It is EPA's policy to include all comments received in the public docket without change or further notice to the commenter and to make the comments available online at *www.regulations.gov*, including any personal information provided, unless a comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit this information to EPA through *regulations.gov* or email. Clearly mark the part or all of the information that you claim to

be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM that you mail to EPA as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2, subpart B.

2. *Tips for preparing your comments.* When preparing and submitting your comments, see the commenting tips at *http://www2.epa.gov/dockets/commenting-epa-dockets#tips.*

XIII. References

The following is a listing of the documents that are specifically referenced in this document. The docket, EPA-HQ-OPPT-2018-0159, includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT.**

1. National Toxicology Program. (NTP, 2016). Report on Carcinogens, Fourteenth Edition.; Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service. Retrieved from *https://ntp.niehs.nih.gov/ntp/roc/content/profiles/asbestos.pdf.*

2. U.S. Environmental Protection Agency. (EPA, 1988). IRIS summary for

asbestos (CASRN 1332-21-4). Washington, DC: Integrated Risk Information System. Retrieved from *http://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0371_summary.pdf*.

3. Agency for Toxic Substances and Disease Registry. (ATSDR, 2001). Toxicological profile for asbestos (update). Retrieved from *https://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=30&tid=4*.

4. International Agency for Research on Cancer. (IARC, 2012). A review of human carcinogens. Part C: Arsenic, metals, fibres, and dusts [IARC Monograph]. Lyon, France: World Health Organization. Retrieved from *http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C.pdf*.

5. International Agency for Research on Cancer. (IARC, 1977). IARC monographs on the evaluation of carcinogenic risk of chemicals to man: Asbestos. Lyon, France: World Health Organization. Retrieved from *http://monographs.iarc.fr/ENG/Monographs/vol1-42/mono14.pdf*.

6. International Agency for Research on Cancer. (IARC, 1987). Asbestos and certain asbestos compounds [IARC Monograph]. In IARC Monographs on the Evaluation of Carcinogenic Risks to Humans (pp. 106-116). Lyon, France. Retrieved from *http://monographs.iarc.fr/ENG/Monographs/suppl7/index.php*.

7. U.S. Environmental Protection Agency. (EPA, 2017). Scope of the Risk Evaluation for Asbestos. Retrieved from *https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0736-0086*.

8. U.S. Environmental Protection Agency. (EPA, 2018). Economic Analysis for the Proposed Significant New Use Rule for Asbestos.

9. U.S. Geological Survey. (USGS, 2018). Mineral Commodity Summaries 2018. Washington, DC: U.S. Department of the Interior. Retrieved from *https://minerals.usgs.gov/minerals/pubs/mcs/2018/mcs2018.pdf.*

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11. U.S. Customs and Border Protection. (2017). *Automated Commercial Environment System (ACE).*

12. National Research Council. (NRC, 2006). Asbestos: Selected cancers. Institute of Medicine (US) Committee on Asbestos: Selected Health Effects. Washington, DC: The National Academies Press.

13. National Research Council. (NRC, 1983). Drinking Water and Health. Washington, DC: Safe Drinking Water Committee, Board on Toxicology and Environmental Health Hazards. Retrieved from *http://dx.doi.org/10.17226/326.*

14. U.S. Environmental Protection Agency. (EPA, 1980). Ambient water quality criteria for asbestos [EPA Report]. (EPA/440/5-80/022). Washington, DC.

15. Anderson, P. H. and Farino, W. J. (1982). Analysis of Fiber Release from Certain Asbestos Products. Draft Final Report. Prepared by GCA Corporation for the U.S. Environmental Protection Agency. Retrieved from *https://nepis.epa.gov/Exe/ZyPDF.cgi/9101PBZ6.PDF?Dockey=9101PBZ6.PDF.*

16. 40 CFR Part 61, Subpart M, Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP).

17. Virta, R. (2011). Asbestos. Kirk-Othmer Encyclopedia of Chemical

Technology. Retrieved from *http://onlinelibrary.wiley.com/doi/10.1002/0471238961.0119020510151209.a01.pub3/pdf.*

18. U.S. Environmental Protection Agency. (EPA, 1984). Significant New Uses of Chemical Substances; Certain Chemicals. 49 FR 35014, September 5, 1984 (FRL-2541-8).

19. U.S. Environmental Protection Agency. (EPA, 2013). Understanding the Costs Associated with Eliminating Exemptions for Articles in SNURs. May 1, 2013.

20. U.S. Environmental Protection Agency. (EPA, 1989). Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products: Final Report: Volume III. (5601989ICF001). Washington, DC: Office of Toxic Substances, U.S. Environmental Protection Agency.

XIV. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is not expected to be a regulatory action subject to Executive Order 13771 (82 FR 9339, February 3, 2017), because this action is not a significant regulatory

action under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA, 44 U.S.C. 3501 *et seq*. Burden is defined in 5 CFR 1320.3(b). The information collection activities associated with existing chemical SNURs are already approved under OMB control number 2070-0038 (EPA ICR No. 1188); and the information collection activities associated with export notifications are already approved under OMB control number 2070-0030 (EPA ICR No. 0795). If an entity were to submit a SNUN to the Agency, the burden is estimated to be approximately 100 hours per response (slightly less for submitters who have already registered to use the electronic submission system).

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information that requires OMB approval under the PRA, unless it has been approved by OMB and displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in Title 40 of the CFR, after appearing in the **Federal Register**, are listed in 40 CFR, part 9, and included on the related collection instrument, or form, as applicable.

D. Regulatory Flexibility Act (RFA)

Pursuant to section 605(b) of the RFA, 5 U.S.C. 601 *et seq*., I certify that promulgation of this SNUR would not have a significant economic impact on a substantial number of small entities. The rationale supporting this conclusion is as follows.

A SNUR applies to any person (including small or large entities) who intends to engage in any activity described in the rule as a "significant new use." By definition of

the word "new" and based on all information currently available to EPA, it appears that no small or large entities presently engage in such activities. Since this proposed SNUR will require a person who intends to engage in such activity in the future to first notify EPA by submitting a SNUN, no economic impact will occur unless someone files a SNUN to pursue a significant new use in the future or forgoes profits by avoiding or delaying the significant new use. Although some small entities may decide to conduct such activities in the future, EPA cannot presently determine how many, if any, there may be. However, EPA's experience to date is that, in response to the promulgation of SNURs covering over 1,000 chemical substances, the Agency receives only a handful of notices per year. During the six-year period from 2005-2010, only three submitters self-identified as small in their SNUN submissions (Ref. 8). EPA believes the cost of submitting a SNUN is relatively small compared to the cost of developing and marketing a chemical new to a firm or marketing a new use of the chemical and that the requirement to submit a SNUN generally does not have a significant economic impact.

Therefore, EPA believes that the potential economic impact of complying with this proposed SNUR is not expected to be significant or adversely impact a substantial number of small entities. In a SNUR that published as a final rule on August 8, 1997 (62 FR 42690) (FRL-5735-4), the Agency presented its general determination that proposed and final SNURs are not expected to have a significant economic impact on a substantial number of small entities.

E. Unfunded Mandates Reform Act (UMRA)

Based on EPA's experience with proposing and finalizing SNURs, State, local, and Tribal governments have not been impacted by these rulemakings, and EPA does not

have any reason to believe that any State, local, or Tribal government would be impacted by this rulemaking. As such, the requirements of sections 202, 203, 204, or 205 of UMRA, 2 U.S.C. 1531-1538, do not apply to this action.

F. Executive Order 13132: Federalism

This action will not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it will not have substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because it will not have any effect on tribal governments, on the relationship between the Federal Government and the Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997), because this action does not address environmental health or safety risks, and EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order.

I. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have any effect on energy supply, distribution, or use.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve any technical standards, and is therefore not subject to considerations under section 12(d) of NTTAA, 15 U.S.C. 272 note.

K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

This action will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). This action does not affect the level of protection provided to human health or the environment.

List of Subjects in 40 CFR Part 721

Environmental protection, Chemicals, Hazardous substances, Reporting and recordkeeping requirements, Asbestos.

Dated: 05/31/18

Tala R. Henry

S.A. 5/31/18 ~~Jeffery T. Morris~~ Tala R. Henry, Acting

Director, Office of Pollution Prevention and Toxics.

Therefore, it is proposed that 40 CFR chapter I be amended as follows:

PART 721--[AMENDED]

1. The authority citation for part 721 continues to read as follows:

Authority: 15 U.S.C. 2604, 2607, and 2625(c).

2. Add the following section:

§ 721.11095 Asbestos.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance identified as asbestos (as defined by 15 U.S.C. 2642(3) as the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite) is subject to reporting under this section for the significant new use described in paragraph (a)(2) of this section.

(2) The significant new use is: manufacturing (including importing) or processing for any of the following uses:

i. Arc chutes;

ii. Beater-add gaskets;

iii. Extruded sealant tape and other tape;

iv. Filler for acetylene cylinders;

v. High grade electrical paper;

vi. Millboard;

vii. Missile liner;

viii. Adhesives, sealants, roof and non-roof coatings;

ix. Pipeline wrap;

x. Reinforced plastics;

xi. Roofing felt;

xii. Separators in fuel cells and batteries;

xiii. Vinyl-asbestos floor tile; or

xiv. Other building products (other than cement products).

(b) *Specific requirements*. (1) Section 721.45(f) does not apply to this section. A person who intends to manufacture (including import) or process the substance identified in paragraph (a)(1) for the significant new use identified in (a)(2) of this section as part of an article is subject to the notification provisions of § 721.25.

(2) [Reserved]

Prepublication Copy Notice:

The Director of EPA's Office of Pollution Prevention and Toxics signed the following *Federal Register* document on May 31, 2018:

Title: Proposed Rule; Asbestos; Significant New Use Rule (RIN 2070-AK45)

FRL: 9978-76

Docket No.: EPA-HQ-OPPT-2018-0159

This is a **prepublication version** of the document that EPA is submitting for publication in the *Federal Register*. While the Agency has taken steps to ensure the accuracy of this prepublication version of the document, **it is not the official version** of the document for purposes of public comment or judicial review. Please refer to the official version of the document that will appear in a forthcoming *Federal Register* publication.

Once the official version of the document publishes in the *Federal Register*, the prepublication version of the document posted on the agency's internet will be replaced with a link to the document that appears in the *Federal Register* publication. At that time, you will also be able to access the on-line docket for this *Federal Register* document at [HYPERLINK "http://www.regulations.gov"].

For further information about the docket and, if applicable, instructions for commenting, please consult the ADDRESSES section in the front of the *Federal Register* document.

Message

From: Keller, Kaitlin [keller.kaitlin@epa.gov]
Sent: 6/23/2018 12:52:58 AM
To: Beck, Nancy [Beck.Nancy@epa.gov]
Subject: Fwd: BNA/B&C Webinar -- Monday, June 25th - 11A
Attachments: 00245239.pptx; ATT00001.htm

Full slide deck attached.

Sent from my iPhone

Begin forwarded message:

> **From:** "Lynn L. Bergeson" <lbergeson@lawbc.com>
> **To:** "Keller, Kaitlin" <keller.kaitlin@epa.gov>
> **Subject: RE: BNA/B&C Webinar -- Monday, June 25th - 11A**
>
> Here is the full deck. Thanks for all your help!
>
> **LYNN L. BERGESON**
> **MANAGING PARTNER**
> BERGESON & CAMPBELL PC
> 2200 Pennsylvania Avenue, N.W. Suite 100W | Washington, D.C. 20037
> T: 202-557-3801 | F: 202-557-3836 | M: 202-257-2872 | lawbc.com
>
> ---
>
> **From:** Keller, Kaitlin [mailto:keller.kaitlin@epa.gov]
> **Sent:** Thursday, June 21, 2018 6:02 PM
> **To:** Chad H. Howlin
> **Cc:** Lynn L. Bergeson
> **Subject:** RE: BNA/B&C Webinar -- Monday, June 25th - 11A
>
> Hi Chad,
>
> I received your message. Yes, Nancy will have a few slides for the webinar. I'll have the slides for you tomorrow as requested.
>
> Thank you,
> Kaitlin
>
> Kaitlin Keller, Special Assistant
> Office of Chemical Safety and Pollution Prevention
> U.S. Environmental Protection Agency
> (202) 564-7098
>
> ---
>
> **From:** Chad H. Howlin [mailto:chowlin@lawbc.com]
> **Sent:** Thursday, June 21, 2018 4:25 PM
> **To:** Keller, Kaitlin <keller.kaitlin@epa.gov>
> **Cc:** lbergeson@lawbc.com
> **Subject:** FW: BNA/B&C Webinar -- Monday, June 25th - 11A

Hi Kaitlin.

Just left you a message at your office.

Thanks.

CHAD H. HOWLIN
LEGAL ASSISTANT
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From: Chad H. Howlin
Sent: Thursday, June 21, 2018 4:12 PM
To: Mary C. Hanley
Cc: Lynn L. Bergeson
Subject: BNA/B&C Webinar -- Monday, June 25th - 11A

Hi Mary.

Receive Nancy's slides tomorrow for Monday's webinar?

Thanks.

CHAD H. HOWLIN
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TSCA at 2: An Update on Implementation and Hot Topics

June 25, 2018

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Program

Opening -- **Lynn L. Bergeson**
Managing Partner
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Agency Update -- **Nancy B. Beck, Ph.D., DABT®**
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency

Key Section 5 Concerns -- **Misty L. Bogle**
Global Product Stewardship Manager
Vertellus

Key Section 5 Concerns -- **Michael Gould**
EH&S Committee Chairman
RadTech North America

Questions

Close

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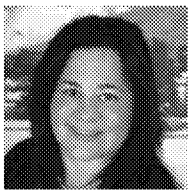

Nancy B. Beck, Ph.D., DABT®
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency

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EPA Office of Chemical Safety & Pollution Prevention (OCSPP) Accomplishments and Priorities under TSCA

Nancy B. Beck, PhD, DABT
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
June 25, 2018
beck.nancy@epa.gov

Toxic Substances Control Act (TSCA) Year 2 Accomplishments

- Addressing Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
- Dust-Lead Hazard Standards
- Final Mercury Reporting Rule
- Transparency and Confidential Business Information (CBI)
  - Unique Identifier
  - Generic Name Guidance
  - Expanded Access to CBI Guidance
- Alternative Strategy to Reduce Animal Testing

TSCA Year 2 Accomplishments

- New Chemicals Points to Consider
- Ten Problem Formulations
- Asbestos Significant New Use Rule (SNUR)
- Systematic Review Approach
- Proposed Fees Rule

Near-Term Priorities

- Methylene Chloride Final Rule
- Establishing a Fee Program
- Updating TSCA Chemical Substance Inventory
  - CBI Review Plan Rule
- Completing First Ten Chemicals Risk Evaluations
- Selecting the Next 40 Chemicals for Prioritization
- Addressing PBTs
- Refining New Chemicals Review

Misty L. Bogle
Global Product Stewardship Manager
Vertellus

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Conditions of Use (COU)

- **Section 3 Definition:** "… the circumstances, as determined by [EPA], under which a chemical is intended, known, or reasonably foreseen to be manufactured, processed…"
- The Office of Pollution Prevention and Toxics (OPPT) considered COU in the past, including foreseeable COU, and would impose restrictions (*e.g.*, use limitations, water release limitations) to protect against those foreseen COU

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Key Concerns

- If the U.S. Environmental Protection Agency (EPA) identifies a COU in which hazard is not low for health and for ecotoxicity ("low/low" cases), EPA is proposing regulation in nearly all cases
  - Basis: "somebody might" exceed the level of concern
  - Any conceivable *vs.* reasonably foreseeable

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Key Concerns

- If EPA determines it is required to regulate under Section 5(f) or Section 5(e), it must do so "to the extent necessary" to protect against unreasonable risk
  - What is "the extent necessary"?
- Example for consideration:
  - An employer requires workers to wear gloves and gloves are provided to all workers
  - If EPA believes that a worker may choose not to wear the required gloves, is that a foreseeable COU and reasonable basis for a SNUR? Does adding a TSCA regulation in addition to the existing Occupational Safety and Health Administration (OSHA) regulation meet the "extent necessary" provision?

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Key Concerns

- Notable outcomes
  - EPA requiring workplace protection duplicative to OSHA requirements
  - Very difficult to “test out” of restrictions -- absent testing to demonstrate low hazard, EPA imposes regulation

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Case Study

BACKGROUND

- Stereoisomer -- non-specific analog already on TSCA Inventory
- Ester -- no releases to water, worker protections included
- Low Volume Exemption (LVE) granted -- no unreasonable risk
- Premanufacture Notification (PMN) application in June 2017
- Added aquatic test data
- Same controls in place
- PMN conditions – "not likely to present unreasonable risk"
- Concern about changes to COU -> non-5(e) SNUR

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Questions for EPA

- Will we see additional guidance on the Agency's interpretation of "reasonably foreseen" circumstances in new chemical review?
- Can industry expect to be regulated in every case, unless our substance is completely non-hazardous?
- When will the backlog of non-5(e) SNURs be resolved?
- Feedback on issues of concern related to COU
- Could/should EPA revisit the option to consider relative risk?
  - Because EPA no longer considers relative risk in new chemical review, less hazardous new chemicals are more highly regulated than more hazardous existing chemicals

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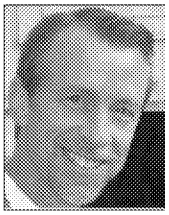

Michael Gould
EH&S Committee Chairman
RadTech North America

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Business Concerns with SNURs

- Consent order or non-order SNUR trigger
  - Section 12(b) export notification if substance present at >1 percent
  - Supply chain communication to all recipients
  - Recordkeeping requirements apply to all levels of supply chain
  - Lower reporting thresholds for Chemical Data Reporting (CDR)
- Some companies prohibit purchasing a substance with a SNUR due to a perception of enhanced risk

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Current Forecast on SNURS

- Many more SNURs in our future
  - Recent analysis shows:
    - About 5 percent of initial determinations are not likely
    - 11.5 percent of final determinations are not likely
    - Is this trend reversible?
- Necessity of SNURs
  - Role of workplace standards
  - Is EPA coordinating with OSHA?

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Case Study

BACKGROUND

- Pre-amended TSCA, PMN filed for substance regulated under LVE
  - Substance is low molecular weight polymer of a discreet chemical substance with known toxicity concerns
- PMN initially dropped, but pulled back into re-evaluation after amended TSCA passed

CURRENT STATUS

- Conclusion of re-evaluation under amended TSCA included certain restrictions
  - Including concentration limitation for imported products
  - Concentration limitation makes it impossible for manufacturer to import raw material
- Re-evaluation also focuses on toxicity of parent compounds versus final product

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Questions for EPA

- Does EPA evaluation take into account the fact that by making the discreet substance into a polymer, the substance has less exposure potential?
  - Less accessible at the cellular level
  - More secure in final cured articles
- Does EPA have recommendations for maintaining import production volumes in circumstances in which product is not restricted in Europe?

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Related SNUR Issues

- Significant delays, especially in SNUR publication
  - Order SNURs -- no reason to delay; required by statute, restrictions established in consent order
  - Non-order SNURs -- authority has been questioned
- Section 5(e) SNURs must be prompt
- Fish or cut bait on non-order SNURs
- Creative solutions when hazards can be addressed by limiting how substance is manufactured
  - Proposal to create new Inventory flag for chemicals with workplace exposure concerns
- Example for consideration: The EPA conservative model predicts exposure a level order of magnitude below a chemical's concentration of concern (COC)
  - Is it foreseeable that COC could be exceeded?
  - Is this a reasonable basis for a SNUR?

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Questions

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Office of Chemical Safety and
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EPA

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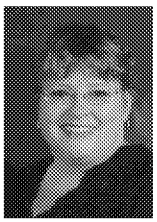
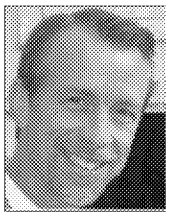


Misty L. Bogle
Global Product
Stewardship Manager
Vertellus



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Thank You

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Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 11/28/2018 5:07:59 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Reed, Kristen [Reed.Kristen@epa.gov]
Subject: FW: PV29 public comment
Attachments: Dr. Tracey Woodruff.pdf; Earthjustice, Alaska Community Action on Toxics, Environmental Health Strategy, et al..pdf; Earthjustice, EDF, NRDC, SCHF.PDF; EDF_1.pdf; EDF_2.pdf; EDF_3.pdf; Environmental Protection Network.pdf; North America's Building Trades Unions.pdf; Safer Chemicals Healthy Families.pdf; State of Rhode Island and Providence Plantations, Department of Attorney General.pdf; The City of New York Law Department.pdf; Academics, Scientists and Clinicians.pdf; American Chemistry Council.pdf; American Coatings Association.pdf; American Public Health Association.pdf; Association of Global Automakers, et al..pdf; Attorneys General of Massachusetts, et al..pdf; Chemicals User Coalition.pdf; Responses to public comments on the PV29 PF_11-28-18.docx

Nancy, here are the comments. Kris please print 3 copies. Thanks

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From: Blair, Susanna
Sent: Wednesday, November 28, 2018 11:26 AM
To: Hanley, Mary <Hanley.Mary@epa.gov>
Cc: Pierce, Alison <Pierce.Alison@epa.gov>
Subject: FW: PV29 public comment

Here are the PDFs of the comments that were addressed in the file I sent yesterday. Also, going through the comments, two of the comment headings in the word file sent yesterday "101 academics" and "Academics, Scientists, and Clinicians" referred to the same comment so they have been combined them under the same heading. The attached word file reflects this change.

EARTHJUSTICE * ALASKA COMMUNITY ACTION ON TOXICS * ENVIRONMENTAL HEALTH STRATEGY CENTER * ENVIRONMENTAL WORKING GROUP * LEARNING DISABILITIES ASSOCIATION OF AMERICA * SIERRA CLUB * UNION OF CONCERNED SCIENTISTS * UNITED STEEL, PAPER AND FORESTRY, RUBBER, MANUFACTURING, ENERGY, ALLIED INDUSTRIAL AND SERVICE WORKERS INTERNATIONAL UNION, AFL-CIO/CLC * WE ACT FOR ENVIRONMENTAL JUSTICE

Submitted online via *Regulations.gov* to dockets EPA–HQ–OPPT–2016–0736, EPA–HQ–OPPT–2016–0741, EPA–HQ–OPPT–2016–0723, EPA–HQ–OPPT–2016–0733, EPA–HQ–OPPT–2016–0735, EPA–HQ–OPPT–2016–0742, EPA–HQ–OPPT–2016–0743, EPA–HQ–OPPT–2016–0725, EPA–HQ–OPPT–2016–0732 and EPA–HQ–OPPT–2016–0737

Earthjustice, Alaska Community Action on Toxics, Environmental Health Strategy Center, Environmental Working Group, Learning Disabilities Association of America, Sierra Club, Union of Concerned Scientists, United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO/CLC, and WE ACT for Environmental Justice — Petitioners and counsel for Petitioners in *Safer Chemicals, Healthy Families v. US EPA*, No 17-72260 (9th Cir.) — submit these comments in strong opposition to many of the approaches taken by the United States Environmental Protection Agency (EPA) in the Problem Formulations of the Risk Evaluations for the "first ten chemicals": asbestos, 1-bromopropane, carbon tetrachloride, 1, 4-dioxane, cyclic aliphatic bromide cluster (HBCD), methylene chloride, N-methylpyrrolidone, perchloroethylene, pigment violet 29, and trichloroethylene (together, problem formulations). We also oppose EPA's reliance, in the risk evaluation process for these chemicals, on its "Application of Systematic Review in TSCA Risk Evaluations" document (TSCA systematic review protocol),[1] which will likely result in the

[1] US EPA, *Application of Systematic Review in TSCA Risk Evaluations* EPA Document# 740-P1-8001 (2018).

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exclusion of meaningful information from EPA's risk evaluations in violation of TSCA section 26. If EPA continues to follow the approach it has laid out in the problem formulations, it will leave the public—and especially vulnerable groups like children, pregnant women, and workers—at ongoing unreasonable risk from the first ten chemicals that are being evaluated under the Toxic Substances Control Act (TSCA). These comments lay out how the problem formulations and TSCA systematic review protocol fail to comply with the language, intent, and purpose of TSCA.

Introduction

Many of the flaws with the problem formulations reflect applications of the illegal processes laid out in Procedures for Chemical Risk Evaluation Under the Amended Toxic Substances Control Act, 82 Fed. Reg. 33,726 (July 20, 2017), codified at 40 C.F.R. § 702.31 through § 702.51 ("Risk Evaluation Rule"). Our organizations have challenged the Risk Evaluation Rule, and this suit is pending before the U.S. Court of Appeals for the Ninth Circuit.[2] If the Ninth Circuit rules that the Risk Evaluation Rule is illegal in any manner that implicates processes, reasoning, or methodologies used in developing the problem formulations, EPA will have to revise the risk evaluations of the first ten chemicals to bring them into compliance with TSCA.

The overriding flaw in the problem formulations is that EPA is not taking a holistic approach to assessing risk, as TSCA mandates. Rather, EPA is excluding from its risk evaluations: hazards; exposure pathways; consideration of the impact of chemicals on vulnerable populations that were identified in the scopes of the risk evaluations of the first ten chemicals published in July 2017; and known or reasonably foreseen conditions of use. It is also

[2] *Safer Chemicals, Healthy Families v. US EPA*, No. 17-72260 (9th Cir. filed Aug. 10, 2017).

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adopting an impermissibly narrow view of the term "conditions of use," such that it excludes ongoing use and disposal of chemicals that are no longer manufactured for that use -- what EPA terms "legacy use" and "associated disposal" -- and ongoing exposures from disposals that initially occurred in the past (what EPA calls "legacy disposal"). Given this panoply of exclusions, the risk evaluations will not accurately characterize the true risk posed by "the chemical substance" under "the conditions of use," as required by TSCA section 6(b)(4).

Congress enacted TSCA in 1976 to give EPA authority to "look comprehensively at the hazards associated with [a] chemical" and to prevent harm to health and the environment through regulation of chemicals posing unreasonable risks. S. Rep. No. 94-698, at 2 (1976). While other federal environmental laws focus on specific media, such as air or water, before TSCA was adopted no federal law gave EPA authority to "look comprehensively" at the hazards of a chemical "in total." *Id.* Congress designed TSCA to fill these "regulatory gaps," S. Rep. No. 94-698, at 1, by adopting a comprehensive approach to chemical risk management that considered "the full extent of human or environmental exposure," H.R. Rep. No. 94-1341, at 6. This comprehensive approach is needed because individuals are often exposed to a chemical from multiple uses through a variety of exposure pathways. TSCA can effectively protect against chemical harm only if EPA evaluates *all hazards and all exposures* to a chemical substance. If EPA does not fully consider all known and reasonably foreseen hazards and exposures during a risk evaluation, the evaluation cannot accurately characterize the true risk posed by the chemical. If EPA fails to accurately characterize risk, it cannot identify and meaningfully manage unreasonable risks.

In addition to improper exclusions, the problem formulations are flawed by failure to rely on "information . . . that is reasonably available to the Administrator," within the meaning of

TSCA,[3] which EPA defines as "information that EPA possesses *or can reasonably generate, obtain and synthesize for use*" in the relevant timeframe.[4] Defying this requirement, many of the proposed exclusions from the risk evaluations are based on inappropriate conjecture and/or incomplete, ambiguous, and self-serving reports by a subset of manufacturers and processors to the effect that they have ceased manufacture. EPA should not rely on such representations because they may not provide complete information. Moreover, a decision to cease manufacture could be reversed at any time, and such resumption may be "reasonably foreseen." EPA must ascertain whether resumption of discontinued uses is reasonably foreseeable. Excluding conditions of use from risk evaluations based on a manufacturer's report that the chemical was discontinued will invite attempts to "game" the process. Even if, upon analysis of all reasonably available information, EPA concludes that re-commencement is not reasonably foreseen, it should not exclude discontinued conditions of use from final risk evaluations unless it also adopts a SNUR that ensures that EPA will receive notice and the opportunity to review -- and deny -- a proposal to re-commence manufacture for conditions of use that are not included in TSCA section 6(b) risk evaluations.

We urge EPA to revise its illegal approaches now, rather than waiting for a federal court to order the agency to make such revisions. Continuing down the current path, which will inevitably need to be revised to bring it in line with the plain meaning of TSCA, will only delay the process and jeopardize EPA's compliance with the timelines mandated by Congress.

A. The problem formulations violate TSCA by excluding known or reasonably foreseen "conditions of use" and "exposure pathways" of the first ten chemicals

[3] 15 U.S.C. § 2625(k).

[4] 40 C.F.R. § 702.3 (emphasis added).

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In conducting a TSCA section 6(b) risk evaluation, EPA must "determine whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other nonrisk factors … under the conditions of use."[5] The directive to "determine whether *a chemical substance* presents an unreasonable risk" requires an evaluation of the chemical's total risk. And the phrase "under *the* conditions of use" unambiguously means *all* of the chemical's conditions of use. That EPA lacks the authority to pick and choose which conditions of use it includes in its TSCA section 6(b) risk evaluations is discussed in detail at pages 21-38 of Petitioners' Opening Brief in *Safer Chemicals, Healthy Families v. U.S. EPA*, No. 17-72260 (9th Cir. filed Apr. 16, 2018) ("Petitioners' Opening Brief"), a copy of which is attached hereto as Exhibit 1, and incorporated herein by reference.

A non-exhaustive sampling of the illegal exclusions proposed in the problem formulations follow.

1. Consumer product exclusions

The problem formulations indicate that EPA plans to exclude from its first ten risk evaluations exposures to chemicals resulting from their known presence in consumer products based on EPA's assertion that their presence is unintended or *de minimis*. These exclusions are not permitted. As one example, EPA plans to exclude consideration of exposure to 1,4-dioxane (a likely human carcinogen) when it is present in consumer products, such as detergents. EPA acknowledges that 1,4-dioxane is present in consumer products, but argues that it is present as a byproduct and that "contamination" is not an "intended" condition of use.[6] Similarly, EPA plans to exclude consideration of exposure to HBCD from its use in children's products, such as toys

[5] 15 U.S.C. § 2605(b)(4)(A).

[6] US EPA, *Problem Formulation of the Risk Evaluation for 1,4-Dioxane*, 18 (2018).

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and car seats, even though manufacturers reported to Washington State Department of Ecology (WSDE) that certain toys and car seats contained HBCD, and independent testing by WSDE confirmed the presence of HBCD in some products.[7] EPA's theory for exclusion is that HBCD was not intentionally added to these products as a flame retardant.

As explained more fully in Petitioners' Opening Brief, EPA's rationales for excluding these consumer exposures to 1,4-dioxane and HBCD are inconsistent with TSCA. These substances are "known" and/or "reasonably foreseen" to be present in consumer products, irrespective of whether they are "intended" to be there. The known and foreseeable presence of these substances in consumer products are "conditions of use" within the meaning of TSCA section 2(4) insofar as they are "circumstances . . . under which [the] chemical substance is . . . known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."[8] Under the statutory definition of "condition of use," it is irrelevant whether a chemical is present in a product unintentionally.

Additionally, EPA plans to exclude exposure to carbon tetrachloride (a probable human carcinogen) from sealants, adhesives, and arts and crafts products because it claims such uses present "de minimis exposure."[9] EPA may not exclude "de minimis" exposures from a risk evaluation because there is no way for EPA to determine which conditions of use will result in de minimis exposure or risk *before* conducting the evaluation whose very purpose is to assess the exposures and risks from those conditions of use. In other words, the risk evaluation is the

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[7] US EPA, *Problem Formulation for Cyclic Aliphatic Bromides Cluster*, 23-24 (2018). EPA also proposed to exclude ongoing uses of HBCD in commercial textiles simply on the basis that the use "appeared to be phasing out." *Id.* at 22. TSCA does not permit this.

[8] 15 U.S.C. § 2602(4).

[9] US EPA, *Problem Formulation of the Risk Evaluation for Carbon Tetrachloride,* 21 (2018).

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process that allows EPA to determine what levels of exposure to a given chemical are insignificant or de minimis. Any attempt to establish a de minimis level of exposure before completion of the risk evaluation would put the cart before the horse; EPA cannot know what is de minimis until it has completed its evaluation. Indeed, the problem formulation demonstrates just this problem. EPA has identified a set of exposures it deems de minimis, but there is no analysis of the actual exposures or the risk such exposures present. That analysis should be part of the risk evaluation that EPA is developing. Moreover, TSCA requires EPA to conduct risk evaluations that consider risks from multiple (sometimes relatively low-dose) exposures to the same chemical. EPA's proposal to exclude conditions of use that result in low exposures would prevent EPA from accurately evaluating total risks to vulnerable subpopulations like children, for whom low doses can pose significant risks, especially when they add up. *See Petitioners' Opening Brief*, at 37-38.

2. Environmental statute exclusions

Each of the problem formulations indicates that EPA plans to exclude exposure pathways on the grounds that such exposures are, or might someday be, regulated in some way under other environmental statutes (though not necessarily under a risk-based safety standard that excludes consideration of costs, as mandated by TSCA) under other environmental statutes.[10] Applying this new exclusion, which was not identified in the scopes of the first ten chemicals, EPA plans

[10] *See, e.g.*, US EPA, *Problem Formulation of the Risk Evaluation for Carbon Tetrachloride*, at 13; US EPA, *Problem Formulation for Cyclic Aliphatic Bromides Cluster*, at 13; US EPA, *Problem Formulation of the Risk Evaluation for 1,4-Dioxane*, at 37; US EPA, *Problem Formulation of the Risk Evaluation for 1-Bromopropane*, at 13. Each of these documents states that EPA will exclude exposure pathways under other environmental statutes, administered by EPA, which adequately assess and effectively manage exposures and for which long-standing regulatory and analytical processes already exist, i.e., the Clean Air Act (CAA), the Safe Drinking Water Act (SDWA), the Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA).

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to exclude consideration of many well-known exposures of concern. This approach is antithetical to the statutory language, structure and purpose of TSCA, which requires EPA to evaluate chemicals under TSCA holistically and comprehensively. *See Petitioners' Opening Brief*, at 21-38.

For example, even though carbon tetrachloride is listed as a hazardous air pollutant under the CAA, emissions standards apply only to a limited list of industrial sources, and the emissions standards are based on maximum achievable control technology, rather than based on health or risk.[11] The standards often do not eliminate emissions, and the remaining emissions may present or contribute to unreasonable risks. For this reason, there is no justification for EPA to exclude ambient air exposures to carbon tetrachloride from the risk evaluations, as proposed.[12] EPA's assertion that "any risks [are] effectively managed when under the jurisdiction of the CAA" has no legal or scientific basis since the CAA provisions governing hazardous air pollutants do not establish a risk-based program. At a minimum, there is no basis for concluding that "unreasonable risk" within the meaning of TSCA, including consideration of potentially exposed and susceptible subpopulations, are "effectively managed" through CAA regulation.[13] Similarly, EPA cannot simply assume that risks are adequately addressed by RCRA. As EPA is well aware, the agency's RCRA regulations are riddled with exclusions and exemptions that limit RCRA's reach, including the protections offered by the Subtitle C "cradle to grave" hazardous waste requirements. Where those protections do not apply, there is no basis for EPA's claim that RCRA will sufficiently guard against risks.

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[11] 42 U.S.C. § 7412(d)(2).

[12] US EPA, *Problem Formulation of the Risk Evaluation for Carbon Tetrachloride*, at 43.

[13] *Id.* at 48.

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Moreover, even if regulations adopted under another environmental statute reduced exposure to a chemical, that exposure pathway must still be evaluated under TSCA unless **no** exposures are ongoing as a result of the regulation. As one of EPA's risk assessment handbooks explains, individuals may be exposed to chemicals "through more than one pathway. … [T]o achieve effective risk assessment and risk management decisions, *all* media and routes of exposure should be assessed."[14]

The 1,4-dioxane problem formulation illustrates why EPA's approach is so concerning. EPA indicates that it will exclude exposure to 1,4-dioxane from drinking water because this chemical is "currently being evaluated" under the SDWA.[15] EPA's proposal glosses over the fact that millions of people are currently drinking water contaminated with 1,4-dioxane, and will continue to do so for the foreseeable future.[16] Moreover, there is no certainty that EPA will ever take any measure under the SDWA to reduce these exposures. Even if EPA were to take some regulatory action under the SDWA, there is no way to know the level of continued exposure nor is there any assurance that the regulatory action will ensure "that the chemical substance . . . no longer presents [unreasonable] risk,"[17] as EPA would be required to ensure if such risks were identified as a result of the TSCA risk evaluation. Similar flaws are rampant in other problem formulations.

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[14] US EPA, *National Center for Environmental Assessment, Exposure Factors Handbook: 2011 Edition* 1-18 (2011) (emphasis added).

[15] US EPA, *Problem Formulation of the Risk Evaluation for 1,4-Dioxane*, at 43.

[16] *See* Declaration of Patricia D. Koman, Ph.D., M.P.P., In Support of Petitioners' Opening Brief, sworn April 13, 2018, submitted herewith as Exhibit 2; Declaration of Detlef Knappe, Ph.D. In Support of Petitioners' Opening Brief, sworn April 11, 2018, submitted herewith as Exhibit 3. These declarations were submitted by Petitioners in *Safer Chemicals, Healthy Families v. US EPA*.

[17] 15 U.S.C. § 2605(a).

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EPA's approach is counter to section 9 of TSCA, which governs EPA's options when laws other than TSCA, but that are administered by EPA, could eliminate or sufficiently reduce risks posed by chemical substances. Under section 9(b), EPA can choose to "protect against [a] risk" that has *already been identified in a TSCA risk evaluation* by using its non-TSCA authorities to manage the identified risks.[18] However this provision applies only *after EPA has completed a risk evaluation* and found unreasonable risk. Once an unreasonable risk determination is made, EPA can decide to "protect against such risk" under a law other than TSCA if it first "determines that a risk to health or the environment associated with a chemical substance or mixture could be eliminated or reduced to a sufficient extent by actions taken under the authorities contained in such other Federal laws."[19] The fact that EPA can look to other environmental statutes to "protect against [a] risk" identified in a TSCA risk evaluation, does not give EPA license to ignore exposures that *might be* reduced, in the future under a different law, when it conducts the TSCA risk evaluation.

In sum, TSCA does not permit EPA to exclude "conditions of use" or exposure pathways from a risk evaluation conducted under section 6(b), as proposed in the problem formulations. If EPA does not change course, such that these and other similar exclusions of conditions of use and their resulting exposures are reflected in the risk evaluations, the resulting risk evaluations will violate TSCA's plain text, structure, and purpose.

B. The problem formulations violate TSCA by excluding so-called legacy uses and associated disposals

Several of the problem formulations propose to exclude exposures from so-called "legacy uses," "associated disposal," and "legacy disposal" -- in other words, exposures from the

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[18] *See id.* § 2608(b)(1).

[19] *Id.*

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ongoing use and disposal of chemicals that are no longer manufactured for the use that is deemed "legacy." EPA asserts that these uses and disposals are not "conditions of use" within the meaning of TSCA. But this approach overlooks that the definition of "condition of use" includes "the circumstances . . . , under which a chemical substance is intended, known, or reasonably foreseen to be . . . used, or disposed of," irrespective of whether it is also manufactured, processed, or distributed in commerce. Because the TSCA definition of "conditions of use" uses a disjunctive "or" list, each lifecycle stage of a chemical, standing alone, is a condition of use, even if some of the chemical's lifecycle stages have been discontinued. EPA's proposed construction in the problem formulations robs the words "use" and "disposal" of their clear, independent role in the statute. For the reasons set forth in Petitioners' Opening Brief at 40-51, EPA's "rewriting [of TSCA's] unambiguous statutory terms" cannot stand. *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2445 (2014).

Not only is EPA's approach illegal under TSCA, it will also leave the population at significant risk of harm from toxic exposures. For example, in the problem formulation for HBCD, EPA proposes to exclude exposures to HBCD related to its use as a flame retardant in high impact polystyrene (HIPS) in electronic components. This is based on EPA's assertion that HBCD is no longer used in HIPS. However, until recently, HBCD was used extensively as an additive flame retardant in casings for electronics such as TVs, DVD players, and computers that were made of HIPS, and as a result, many people *continue to be exposed to HBCD* from electronics in their homes. Indeed, a recent study found a significant correlation between the number of electronics in the home and the amount of HBCD on people's hands (an exposure metric used to estimate dermal absorption and hand-to-mouth ingestion), indicating that

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electronics are a significant source of exposure for people.[20] EPA's problem formulation acknowledges these ongoing exposures. In the Executive Summary of the HBCD problem formulation, EPA states: "In indoor environments, there may also be exposures resulting from legacy uses of HBCD in articles (textiles, electronics and electrical products) containing HBCD."[21] Yet, inexplicably, EPA is proposing to exclude these consumer exposures from ongoing uses of products containing HBCD from the risk evaluations. This result is especially wrong-headed given that there is a robust marketplace for "used electronics" in this country, as is evident on eBay, craigslist, and the like. In light of the known ongoing exposures to HBCD from HIPS in electronics, it is unconscionable and illegal for EPA to exclude this exposure pathway from its risk evaluation.

EPA should modify the problem formulations to bring them into line with congressional intent that all exposures from use and disposal be addressed in section 6(b) risk evaluations so that evaluation and management of chemicals truly protects against unreasonable risk.

C. The problem formulations ignore known exposed and susceptible subpopulations

Under TSCA section 6(b), each risk evaluation must consider "whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other nonrisk factors, *including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant to the risk evaluation by the*

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[20] Tay JH *et al.* Assessment of Dermal Exposure to Halogenated Flame Retardants: Comparison Using Direct Measurements from Hand Wipes with an Indirect Estimation from Settled Dust Concentrations. 115:285–94 (2018). Additional information about residential exposure to HBCD is set forth in the Declaration of Veena Singla, Ph.D. In Support of Petitioners' Opening Brief, sworn April 3, 2018, a copy of which is submitted herewith as Exhibit 4.

[21] US EPA, *Problem Formulation for Cyclic Aliphatic Bromides Cluster*, at 10.

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Administrator, under the conditions of use."[22] The statutory requirement to consider risks to potentially exposed or susceptible subpopulations runs throughout section 6(b). Despite this clear mandate, EPA's problem formulations propose to narrow the set of "susceptibilities" that would put certain subpopulations "at greater risk than the general population of adverse health effects from exposure,"[23] as compared to the Scope documents published in July 2017.

For 1-bromopropane, for example, in section 2.4.2.3 of the Scope, entitled "Potentially Exposed or Susceptible Subpopulations," EPA indicates that it considers pregnant women and infants to be vulnerable populations, referencing findings of developmental toxicity in a rodent study and indicating that the study is "representative of a sensitive subpopulation (i.e., adult women of childbearing age and their offspring)."[24] However, in the parallel section 2.4.2.3 of the Problem Formulation, EPA fails to reference a single vulnerable population. Rather, it states that "[i]n developing the hazard assessment, EPA will evaluate available data to ascertain whether some human receptor groups may have greater susceptibility than the general population to the chemical's hazard(s)."[25] In other words, without explanation, EPA no longer references adult women of childbearing age and their offspring as "sensitive subpopulations" when it comes to 1-bromopropane. This unexplained decision not to include adult women of childbearing age and their offspring as potentially exposed or susceptible subpopulation, despite being identified as such in the scope, is not permissible.

Similarly, for asbestos, EPA has removed age, pre-existing health conditions, genetic makeup/ genetic polymorphisms, co-exposure to other substances, early age at exposure,

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[22] 15 U.S.C. § 2605(b)(4)(A) (emphasis added).

[23] *Id.* § 2602(12).

[24] US EPA, *Scope of the Risk Evaluation for 1-Bromopropane,* 34 (2017).

[25] US EPA, *Problem Formulation of the Risk Evaluation for 1-Bromopropane*, at 45.

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smoking, and pre-existing respiratory conditions.[26] For TCE, it has removed life stage, gender-specific, genetic variation, race/ethnicity, preexisting health status, lifestyle factors and nutrition status from its list of factors that increase susceptibility to greater harm.[27] These inexplicable proposals to omit certain vulnerable populations from the risk evaluations are not permitted by TSCA. EPA must modify its approach to ensure that each of the problem formulations considers the greater exposures and greater susceptibilities of "potentially exposed and susceptible subpopulations," as the statute requires.

D. The problem formulations violate TSCA by excluding from their conceptual models conditions of use, exposure pathways, hazards, and potentially exposed and susceptible subpopulations that were included in the scope documents released in June 2017

Not only do the problem formulations describe an approach that would violate the *substantive* requirements of TSCA (insofar as they exclude known or reasonably foreseen hazards, exposure pathways, and conditions of use), moving forward with the new approach would violate the *procedures* mandated by TSCA. Specifically, TSCA section 6(b)(4)(D) precludes narrowing the hazards, exposures, conditions of use, and potentially exposed or susceptible subpopulations that were included in the scopes of the risk evaluations published in June 2017 (scopes). Under TSCA, after EPA initiates a risk evaluation, it must "publish *the scope of the risk evaluation to be conducted*, including the hazards, exposures, conditions of use, and the potentially exposed or susceptible subpopulations the Administrator expects to consider."[28] Nothing in TSCA authorizes EPA to issue a "problem formulation" document after

[26] US EPA, *Scope of the Risk Evaluation for Asbestos,* 35 (2017).

[27] US EPA, *Scope of the Risk Evaluation for Trichloroethylene,* 38 (2017).

[28] 15 U.S.C. § 2605(b)(4)(D) (emphasis added).

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the scoping process, and it certainly does not authorize EPA to use such a document to narrow the published scope of the risk evaluation.

EPA's approach is especially concerning because the parameters of "the scope of the risk evaluation" published pursuant to this section have legal consequences. For example, "the scope of the risk evaluation" determines the extent that EPA's actions preempt state actions involving the chemicals evaluated under TSCA section 6(b). Under TSCA section 18(b)(1), once EPA "defines the scope of a risk evaluation for a chemical substance under section 2605(b)(4)(D)," no State may establish a statute, criminal penalty, or administrative action prohibiting or restricting the manufacture, processing, distribution in commerce, or use of such chemical substance until EPA issues a risk evaluation or its time to do so expires. Under TSCA section 18(c)(2), federal preemption applies only to "the hazards, exposures, risks, and uses or conditions of use of such chemical substances included in the scope of the risk evaluation pursuant to section 2605(b)(4)(D) of this title."[29] If EPA establishes "the scope of the risk evaluation," but then narrows that scope — as it is proposing to do here — States would arguably be preempted from regulating hazards, exposures, and risks that EPA is not addressing in its risk evaluation, merely because these hazards, exposures and risks were (fleetingly) included in the Scope. This would undermine the right and ability of states to regulate to protect their citizens where EPA has chosen to stand to the side.

For this reason, EPA cannot now backtrack on the June 2017 scopes by excluding hazards, exposure pathways, susceptible populations and conditions of use that were included in the June 2017 scopes. Instead, EPA must analyze all of these factors and their contribution to the risk posed by the chemical substance.

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[29] *Id.* § 2617(c)(2).

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E. The problem formulations indicate that EPA is proposing to base the risk evaluations on unreliable or incomplete information in violation of TSCA

TSCA requires EPA to consider "information" relating to a chemical that is "reasonably available to the Administrator" throughout the risk evaluation process.[30] So that EPA can obtain and develop "the information necessary to fill knowledge gaps before making regulatory decisions,"[31] Congress expanded EPA's information-gathering authorities as part of the 2016 amendments to TSCA.[32]

1. Failure to rely on meaningful information

Despite the requirement that EPA rely on reasonably available information, the problem formulations suggest that EPA is relying on unfounded conjecture, incomplete, ambiguous, and self-serving reports by a subset of manufacturers and processors, or in some cases on the *absence* of information. This approach is incompatible with the TSCA requirements to base decisions on reasonably available information and the best available science.[33]

The HBCD problem formulation illustrates these concerns, which are present in the other problem formulations as well. EPA appears to be rejecting reliable evidence that HBCD continues to be used in consumer products, but with no justification. For example, EPA notes "[f]rom June 2012 to March 2017, the use of HBCD in children's clothing and blankets was self-reported 44 times by manufacturers and retailers to Washington State under state law."[34] Despite what appears to be clear evidence that HBCD is used in textiles, EPA inexplicably

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[30] *Id.* § 2625(k).

[31] H.R. Rep. No. 114-176, at 22 (2015).

[32] *See id.*; 15 U.S.C. §§ 2603(a)(1), (a)(2).

[33] *See id.* §§ 2625(h), (k).

[34] US EPA, *Problem Formulation for Cyclic Aliphatic Bromides Cluster,* at 22.

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proposes to exclude this use from the risk evaluation, stating that "[i]nformation gathered from research, industry and consumer product organizations has led EPA to believe that HBCD is no longer used in consumer textiles. Current use in consumer textiles has not been confirmed and EPA does not believe it is known, intended, or reasonably foreseen. Therefore, use in consumer textiles is not a condition of use under which EPA will evaluate HBCD."[35] Excluding uses based on conjecture that is inconsistent with clear evidence cannot be squared with the informational requirements and scientific standards in TSCA section 26.

In addition, EPA asserts that HBCD is no longer used in the production of flame retardants, EPS resins, high impact polystyrene, XPS masterbatch, motor vehicle upholstery, consumer textiles, and military, institutional and aviation textile applications. As a result, EPA plans to exclude these uses from the risk evaluation because it considers them not to be "conditions of use."[36] But these critical exclusions are based primarily on self-serving assertions from a subset of HBCD manufacturers, or the absence of information. For example:

- EPA states that "no information was identified that confirms use of HBCD in recycled HIPS for the purposes of flame retardancy. EPA, therefore, does not believe that this use is intended, known, or reasonably foreseen and is not a condition of use for HBCD." [37]
    - EPA cannot exclude uses based on the absence of information.
    - EPA cannot act based on "belief," rather than information.
    - It is irrelevant whether HBCD is present for purposes of flame retardancy.

- EPA states: "Albemarle Corporation, another historic manufacturer of HBCD, indicated that they stopped manufacturing HBCD flame retardants around 2016 and do not intend to resume the manufacture of HBCD-based flame retardants."[38]
    - What will ensure that Albemarle does not change its "intention" and resume manufacture? In the absence of a legal restriction on resumed manufacture, this intention should not be a basis of excluding uses from the risk evaluation.

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[35] *Id.*

[36] US EPA, *Problem Formulation for Cyclic Aliphatic Bromides Cluster*, at 24-25.

[37] *Id.* at 21.

[38] *Id.* at 20.

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- Even if Albemarle is true to its "intention," what will ensure that other manufacturers do not start the manufacture of HBCD-based or even HCBD containing flame retardants given the market "opening" by Albemarle's withdrawal?

- EPA states: "The EPS Industry Alliance (EPS-IA) which represents all major North American manufacturers (including Canada and Mexico) of EPS resin, reports that its members have phased out of the use of HBCD in the production of EPS resins."[39]
  - What assurance does EPA have that this "report" is accurate?
  - What about "non-major" manufacturers?

- EPA states that "Use of HBCD in High Impact Polystyrene (HIPs) appears to have ceased and EPA does not believe this use is intended, known, or reasonably foreseen."[40]
  - What does it mean that use "appears to have ceased"?
  - EPA cannot exclude uses based on belief, rather than information.

These are nothing more than speculative predictions about future events for which EPA has provided no evidence in support.

We also note that in the problem formulation for 1-bromopropane, EPA indicates that it will exclude many consumer uses of this substance, despite the fact that it is present in products that are generally available to consumers. EPA indicates that it will not consider consumer uses of 1-bromopropane as an adhesive because these products are "usually [sold] in amounts larger than consumers could use" and are sold through wholesale channels. EPA also indicates that it is excluding consumer use of 1-bromopropane as a brake cleaner and engine degreaser, despite the fact that many consumers do repair work on their own cars. EPA's theory is that 1-bromopropane has not been advertised for consumer use and expensive.[41] These evidence-less rationales for exclusion are not sufficient to conclude that consumers would not use this product.

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[39] *Id.* at 21.

[40] *Id.*

[41] US EPA, *Problem Formulation of the Risk Evaluation for 1-Bromopropane*, at 19.

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2. EPA cannot rely on uncertified chemical manufacturer's assertions that a product has been discontinued

Even if it were appropriate for EPA to exclude from its risk evaluations *truly discontinued* uses — and this would only be appropriate if there is no known, intended or reasonably foreseen ongoing use or disposal of the substance — EPA cannot conclude that a use is discontinued simply based on the agency's surmise that manufacture "appears" to have ceased, or that a manufacturer "indicated" that they are no longer making the substance. The fact that major manufacturers have ceased production does not mean that manufacture is not known or reasonably foreseeable, because it tells us nothing about minor manufacturers. Indeed, minor manufacturers can become major manufacturers once their larger competitors leave the business. Appearances, indications, beliefs, reports, and so on, do not constitute "information," and TSCA requires EPA to base its risk evaluations on "information."

For EPA to exclude a condition of use from its risk evaluation because use has discontinued, it must conduct an analysis based on all reasonably available information to confirm that re-commencement is not reasonably foreseen. And it must have in place a SNUR that prohibits the renewed manufacture and processing of all discontinued uses without notice to and review by EPA. Absent a meaningful analysis of whether resumption is reasonably foreseen, as well as SNURs that close the door on resumption, EPA would be excluding uses in the absence of reliable information.

3. EPA has failed to obtain all "reasonably available information" about asbestos and methylene chloride

The problem formulations for asbestos and methylene chloride indicate that EPA is not taking into account some of the most reliable information regarding the levels of workplace

exposure to these substances. Under OSHA, every employer whose employees are at risk of exposure to asbestos must conduct periodic exposure monitoring, including monitoring of employees who are, or may reasonably be expected to be exposed to airborne concentrations" over levels set by OSHA.[42] The same is true for methylene chloride.[43] Records of this medical monitoring must be retained for 30 years.[44] EPA should ask all employers subject to these mandates to submit these records to EPA so the agency can rely on them in its risk evaluations. As there is "reasonably available" information regarding actual workplace exposures to asbestos and methylene chloride, EPA is obligated to consider it under TSCA section 26(k).[45]

F. EPA should not rely on the TSCA systematic review protocol in the risk evaluations

The TSCA systematic review protocol describes how EPA intends to identify, evaluate, and integrate scientific information used in TSCA risk evaluations. We urge EPA not to utilize the approach laid out in this document in developing the risk evaluations for the first ten chemicals. TSCA does not permit reliance on this approach because it is not consistent with best practices for systematic review (as detailed in comments submitted during this comment period from the University of California San Francisco Program on Reproductive Health and the Environment, and others). Rather than laying out a method for evaluating the quality of evidence, this protocol will result in the exclusion of studies that may contain valid scientific data. TSCA requires EPA to conduct risk evaluations "us[ing] scientific information, technical procedures, measures, methods, protocols, methodologies, or models, employed in a manner

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[42] 29 C.F.R. § 1910.1001(d)(2)(i).

[43] *Id.* § 1910.1052(d).

[44] *Id.* § 1910.1020(d)(1)(i).

[45] 15 U.S.C. § 2625(k).

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consistent with the best available science"[46] and reasonably available information.[47] The TSCA systematic review document lays out a protocol that is inconsistent with this mandate by excluding information from EPA's consideration based on a single reporting or methodological limitation even when the study provides some valid and meaningful information. TSCA section 26(h), (i) and (k) reveal Congress's intent that EPA gather all reasonably available information and give it the appropriate weight taking into account limitations. EPA's new TSCA systematic review protocol is antithetical to TSCA section 26 insofar as it will entirely exclude meaningful, scientifically valid information based on single-flaw thresholds. It would be legal error for EPA to continue to rely on this approach as it moves forward with its risk evaluations.

CONCLUSION

For the foregoing reasons, TSCA requires EPA to modify the problem formulations so its risk evaluations encompass all conditions of use, including for uses and disposal of substances no longer manufactured for these purposes, address risks to all potentially exposed and susceptible subpopulations, and are based on all reasonably available information and a systematic review protocol that is established through a transparent and scientific process that meets globally established best practices.

Submitted this 16th day of August 2018 by:

Earthjustice

Alaska Community Action on Toxics

Environmental Health Strategy Center

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[46] *Id.* § 2625(h).

[47] *Id.* § 2625(k).

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Environmental Working Group

Learning Disabilities Association of America

Sierra Club

Union of Concerned Scientists

United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO/CLC

WE ACT for Environmental Justice

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Exhibit 1

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Docket No. 17-72260
Consolidated with Docket Nos. 17-72501, 17-72968, 17-73290, 17-73383, 17-73390

SAFER CHEMICALS, HEALTHY FAMILIES et al.,

Petitioners,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY et al.,

Respondents.

IPC INTERNATIONAL, INC. et al.,

Respondents-Intervenors.

On Petition for Review of Final Rules of the U.S. Environmental Protection Agency

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OPENING BRIEF OF PETITIONERS:

ALASKA COMMUNITY ACTION ON TOXICS; ALLIANCE OF NURSES FOR HEALTHY ENVIRONMENTS; ASBESTOS DISEASE AWARENESS ORGANIZATION; CAPE FEAR RIVER WATCH; ENVIRONMENTAL DEFENSE FUND; ENVIRONMENTAL HEALTH STRATEGY CENTER; ENVIRONMENTAL WORKING GROUP; LEARNING DISABILITIES ASSOCIATION OF AMERICA; NATURAL RESOURCES DEFENSE COUNCIL; SAFER CHEMICALS, HEALTHY FAMILIES; SIERRA CLUB; UNION OF CONCERNED SCIENTISTS; UNITED STEEL, PAPER AND FORESTRY, RUBBER, MANUFACTURING, ENERGY, ALLIED INDUSTRIAL AND SERVICE WORKERS INTERNATIONAL UNION, AFL-CIO/CLC; VERMONT PUBLIC INTEREST RESEARCH GROUP; and WE ACT FOR ENVIRONMENTAL JUSTICE

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CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1, Petitioners Safer Chemicals, Healthy Families; Asbestos Disease Awareness Organization; Vermont Public Interest Research Group; Environmental Defense Fund; Alliance of Nurses for Healthy Environments; Cape Fear River Watch; Natural Resources Defense Council; Alaska Community Action on Toxics; Environmental Health Strategy Center; Environmental Working Group; Learning Disabilities Association of America; Sierra Club; Union of Concerned Scientists; WE ACT for Environmental Justice; and United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO/CLC submit that they have no parent corporations and no publicly issued stock shares or securities. No publicly held corporation holds stock in any of the petitioners.

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PRELIMINARY STATEMENT

Toxic chemicals pervade our environment. Chemicals pollute our air, soil, and water, and contaminate our homes, workplaces, and consumer products.

Congress enacted the Toxic Substances Control Act (TSCA) in 1976 to give the U.S. Environmental Protection Agency (EPA or Agency) authority to "look comprehensively at the hazards associated with [a] chemical" and to prevent harm to health and the environment through regulation of chemicals posing unreasonable risks. S. Rep. No. 94-698, at 2 (1976). Nonetheless, the vast majority of chemicals in commerce have never been reviewed by EPA for safety and remain unregulated. This near-total failure to address chemical risks led Congress to amend TSCA in 2016, establishing a mandatory process to systematically evaluate and manage the risks of existing chemicals.

To implement this new mandate, Congress required EPA to issue two rules, known as the Framework Rules, establishing the processes by which EPA will prioritize chemicals for risk evaluations and then conduct those evaluations. The evaluation results—a finding of whether a chemical presents an unreasonable risk to health or the environment—dictate whether the Agency must ban, restrict, or otherwise regulate the chemical to prevent the risk.

Risk—the likelihood of harmful effects to human health or ecological systems—is determined by the toxicity of a chemical (i.e., its hazard) combined

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with how much contact (i.e., exposure) a person or ecological receptor has with the chemical.[1] Often, individuals are exposed to a chemical from multiple uses and through a variety of exposure pathways. Thus, TSCA can effectively protect against chemical harm only if EPA evaluates *all hazards and all exposures.* If EPA does not fully consider all known and reasonably foreseen hazards and exposures during a risk evaluation, the evaluation cannot accurately characterize the true risk posed by the chemical. Accordingly, the law requires EPA to examine broadly all of a chemical's "conditions of use," a term TSCA defines to encompass a chemical's entire lifecycle, starting with manufacture and processing, and continuing through distribution, use, and disposal.

EPA proposed the Framework Rules in January 2017 to implement Congress's mandate. The proposals complied with TSCA's requirement to comprehensively evaluate a chemical's hazards and exposures and make a holistic determination of whether the chemical presents an unreasonable risk of injury.

In the spring of 2017, a former chemical-industry advocate who had just been appointed by the new administration oversaw the final drafting of the Framework Rules. Following this appointment, EPA abruptly reversed course and adopted the approach favored by the chemical industry, in many instances revising

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[1] U.S. EPA, *About Risk Assessment*, https://www.epa.gov/risk/about-risk-assessment.

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the rules to match the chemical industry's comments word for word. In the final Framework Rules, EPA asserts unfettered discretion to exclude known or reasonably foreseen exposure pathways from consideration, thereby ignoring important contributors to a chemical's overall risk.

The Framework Rules unlawfully narrow the scope of risk evaluations by allowing EPA to exonerate chemicals based on only a partial review of known or reasonably foreseen uses and exposures. The Rules thereby threaten to leave the public—and especially vulnerable groups like children, pregnant women, and workers—inadequately protected from the potential risks of the thousands of chemicals to which individuals are exposed every day. Essential parts of the Rules violate Congress's unambiguous command to evaluate each chemical holistically and comprehensively, and those parts must be set aside.

STATEMENT OF JURISDICTION

Respondents EPA and Administrator Scott Pruitt (together, EPA) issued the Framework Rules pursuant to their authority under TSCA. 15 U.S.C. § 2605(b)(1)(A), (b)(4)(B); ER 1, 29.[2] The U.S. Courts of Appeals have jurisdiction to review the final Rules. 15 U.S.C. § 2618(a)(1)(B). Venue is proper in this Court because Petitioner Alaska Community Action on Toxics resides in

[2] Petitioners use "ER" to refer to the Excerpts of Record and "PA" to refer to Petitioners' Addendum of Declarations in Support of Standing.

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Alaska, and Petitioners Asbestos Disease Awareness Organization and Sierra Club reside in California. PA 5, 51, 321.

The Framework Rules were published on July 20, 2017, ER 1, 29, and issued for purposes of judicial review on August 3, 2017, *see* 40 C.F.R. § 23.5. Petitioners filed timely petitions for review in three Courts of Appeals on August 10 and 11, 2017. *See* 15 U.S.C. § 2618(a)(1)(A); Pet'rs' Joint Opp'n to Resps.' Mot. to Transfer 4-5, ECF No. 18 (listing petitions). All six petitions challenging the Rules were subsequently consolidated in this Court. Order, No. 17-1926 (4th Cir. Dec. 11, 2017), ECF No. 63; Order, No. 17-72260 (9th Cir. Jan. 3, 2018), ECF No. 34; *see* 28 U.S.C. § 2112(a)(3), (a)(5).

STATEMENT OF ISSUES PRESENTED

1. Congress directed EPA to conduct risk evaluations to determine whether "a chemical substance" presents an unreasonable risk of injury to health or the environment under "the conditions of use." 15 U.S.C. § 2605(b)(1)(A).

   a. Does TSCA grant EPA authority to pick and choose which conditions of use it will consider in prioritizing chemicals and conducting risk evaluations?

   b. Does TSCA permit EPA to conclude a risk evaluation without determining whether the chemical substance as a whole presents an unreasonable risk?

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c. Does TSCA permit EPA to determine that individual conditions of use do not present an unreasonable risk before completing its evaluation of the chemical substance as a whole?

2. Congress defined "conditions of use" as "the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of." 15 U.S.C. § 2602(4). Has EPA unlawfully rewritten this definition by excluding a chemical's ongoing and future use and disposal from "conditions of use" if the chemical's manufacture, processing, and distribution for that specific use have been discontinued?

3. Congress directed EPA to consider all "reasonably available" information when making priority designations and conducting risk evaluations. 15 U.S.C. § 2625(k). Are the Framework Rules contrary to this mandate or arbitrary and capricious because they (a) penalize incomplete submissions by public commenters; (b) create thresholds for considering scientific information; (c) allow manufacturers to withhold relevant information about a chemical when requesting risk evaluations; and/or (d) fail to require EPA to consider during prioritization whether it has adequate information to conduct a risk evaluation?

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STATUTORY ADDENDUM

Petitioners attach a separate Statutory Addendum to their Opening Brief. 9th Cir. R. 28-2.7.

STATEMENT OF THE CASE

I. The Toxic Substances Control Act

A. The unfulfilled promise of the 1976 enactment

Congress enacted TSCA in 1976 to "prevent unreasonable risks of injury to health or the environment" from chemicals. S. Rep. No. 94-698, at 1; Pub. L. No. 94-469, 90 Stat. 2003 (codified at 15 U.S.C. § 2601 et seq.) (1976). Then-existing environmental laws were "clearly inadequate" to address the "serious risks of harm" to public health from toxic chemicals. H.R. Rep. No. 94-1341, at 7 (1976); *see* S. Rep. No. 94-698, at 3 ("[W]e have become literally surrounded by a man-made chemical environment. … [T]oo frequently, we have discovered that certain of these chemicals present lethal health and environmental dangers."). While other federal environmental laws focused on specific media, such as air or water, none gave EPA authority to "look comprehensively" at the hazards of a chemical "in total." S. Rep. No. 94-698, at 2.

Congress designed TSCA to fill these "regulatory gaps," S. Rep. No. 94-698, at 1, through a comprehensive approach to chemical risk management that considered "the full extent of human or environmental exposure," H.R. Rep. No.

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94-1341, at 6. However, the 1976 law proved ineffective at reducing risks to public health from toxic chemicals existing in commerce.

First, while TSCA section 6 required EPA to restrict unsafe chemicals, *see* 90 Stat. 2003, § 6(a), it did not establish a systematic process or schedule for evaluating whether chemicals present unreasonable risks of injury to health or the environment. As a result, EPA rarely restricted or banned existing chemicals, and these chemicals could remain in commerce indefinitely without any safety review by EPA. S. Rep. No. 114-67, at 4 (2015).

Second, EPA's use of section 6 was hampered by a court ruling invalidating EPA's 1989 ban on most uses of asbestos. *See Corrosion Proof Fittings v. EPA*, 947 F.2d 1201 (5th Cir. 1991). The court overturned EPA's asbestos rule on the grounds that EPA's cost-benefit analysis was flawed and that EPA failed to impose the "least burdensome" risk mitigation measure among available alternatives. *Id.* at 1215-17. Following this decision, EPA's section 6 rulemaking came to a standstill: EPA has not finalized a rule regulating an existing chemical under section 6 in nearly thirty years. S. Rep. No. 114-67, at 4. In fact, in the more than forty years since TSCA's enactment, EPA has only five times used its section 6 authority to ban, limit production of, or restrict the use of existing chemicals.[3]

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[3] *See* U.S. Gov't Accountability Office, *Chemical Regulation: Options Exist to Improve EPA's Ability to Assess Health Risks and Manage Its Chemical Review Program* 18 (June 2005), https://www.gao.gov/products/GAO-05-458.

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B. The 2016 amendments

In 2016, Congress overhauled TSCA by enacting the Frank R. Lautenberg Chemical Safety for the 21st Century Act (together with the 1976 law, the amended statute is referred to as TSCA). Pub. L. No. 114-182, 130 Stat. 448 (codified at 15 U.S.C. § 2601 et seq.) (2016). Congress affirmed that the intent of the original law—to give EPA "authority to look at the hazards [of chemicals] in total," S. Rep. No. 94-698, at 2—remained "intact." S. Rep. No. 114-67, at 7.

The 2016 amendments establish new requirements in section 6 for EPA to systematically evaluate the potential risks presented by existing chemicals. The Agency must now undertake a step-by-step process to (1) select, i.e., "prioritize" chemical substances needing evaluation based on their potential risk to health and the environment; (2) conduct "risk evaluations" of those prioritized chemicals, and some chemicals nominated by manufacturers, to determine whether they present unreasonable risks of injury to health or the environment; and (3) eliminate such risks by issuing rules regulating those chemicals. 15 U.S.C. § 2605(a)-(b).

Throughout the amendments to section 6, Congress used a new term, "conditions of use," to describe the circumstances EPA must consider when prioritizing chemicals for review and conducting risk evaluations. The statute broadly defines "conditions of use" as "the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or

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reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of." *Id.* § 2602(4). The amendments also clarified that EPA's "unreasonable risk" determination must be made "without consideration of costs" and removed the "least burdensome" requirement—modifying language that had doomed the asbestos ban. *Id.* § 2605(a), (b)(4)(A).

1. Prioritization

TSCA requires EPA to establish a "risk-based screening process," called prioritization, to guide EPA's selection of chemicals warranting full risk evaluation. Chemicals designated as "high-priority"—meaning they "may present an unreasonable risk of injury to health or the environment because of a potential hazard and a potential route of exposure under the conditions of use," *id.* § 2605(b)(1)(B)(i)—will undergo immediate risk evaluations. *Id.* § 2605(b)(3)(A). Chemicals designated as "low-priority"—a designation that must be based on "information sufficient to establish" that the chemical "does not meet the standard" for high-priority designation, *id.* § 2605(b)(1)(B)(ii)—will not undergo further review at that time. *Id.* § 2605(b)(1)(A).

2. Risk evaluations

Once EPA designates a chemical as high-priority, it must initiate a risk evaluation for that chemical and complete it within three years (with a possible six-month extension). *Id.* § 2605(b)(3)(A), (b)(4)(G). EPA must also conduct risk

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evaluations on some chemicals nominated by their manufacturer(s). *Id.* § 2605(b)(4)(C)(ii). Manufacturer-requested risk evaluations must follow the same process and meet the same requirements as EPA-initiated evaluations. *See id.* § 2605(b)(4)(C), (b)(4)(E)(ii).

Through each risk evaluation, EPA must

> determine whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other nonrisk factors … under the conditions of use.

Id. § 2605(b)(4)(A). EPA must evaluate risks not only to the general population, but also to relevant "potentially exposed or susceptible subpopulation[s]." *Id.* These include groups such as "infants, children, pregnant women, workers, or the elderly," that, "due to either greater susceptibility or greater exposure," may face greater risks of harm than the general population from chemical exposures. *Id.* § 2602(12).

As an initial part of the evaluation, EPA must publish the "scope" of the evaluation, describing "the hazards, exposures, conditions of use, and the potentially exposed or susceptible subpopulations the Administrator expects to consider." *Id.* § 2605(b)(4)(D). EPA must also, among other requirements, "integrate and assess available information on hazards and exposures for the conditions of use of the chemical substance." *Id.* § 2605(b)(4)(F)(i). This is because characterizing exposure involves gathering information on the various

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conditions of use of a chemical to determine the potential pathways of exposure to the chemical and estimate the extent of exposure to people or environmental receptors, including the duration, intensity, frequency, and number of exposures. *Id.* § 2605(b)(4)(F)(iv); *see* ER 52-54. Characterizing hazard involves reviewing scientific studies to determine the nature and severity of the harms caused by the chemical. ER 54-56. Ultimately, the risk evaluation will combine EPA's exposure and hazard assessments to estimate the risk the chemical presents. ER 56-57.

3. Risk management rules

If EPA determines "that the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance or mixture, or that any combination of such activities, presents an unreasonable risk" to health or the environment, EPA must issue a rule under section 6(a) to address the risk. 15 U.S.C. § 2605(a), (c)(1). This rule must impose restrictions or other requirements designed to eliminate the unreasonable risk. *Id.* § 2605(a). Such requirements may include full or partial bans on manufacture, processing, or distribution; warning labels; recordkeeping requirements; use restrictions; and prohibitions or limits on methods of disposal. *Id.*

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4. Obtaining information

TSCA requires EPA to consider information relating to a chemical that is "reasonably available to the Administrator" throughout the prioritization and risk evaluation processes. *Id.* § 2625(k). To allow EPA to obtain and develop "the information necessary to fill knowledge gaps before making regulatory decisions," H.R. Rep. No. 114-176, at 23 (2015), Congress expanded EPA's information-gathering authorities as part of the 2016 amendments. *See id.* at 22-23; 15 U.S.C. § 2603(a)(1), (a)(2).

II. History of the Framework Rules

Congress required EPA to issue the Framework Rules to implement the amendments to section 6. 15 U.S.C. § 2605(b)(1)(A), (b)(4)(B).

A. The proposed Rules

EPA issued the proposed Prioritization and Risk Evaluation Rules on January 17 and 19, 2017, respectively. ER 577, 60.

The proposed Rules complied with TSCA's mandate to take a comprehensive approach to chemical risk evaluation. EPA explained in the proposed Prioritization Rule that, "in response to clear statutory directives," it would "designate the priority of a 'chemical substance,' as a whole," rather than "a specific use or subset of uses of a chemical substance." ER 581. In the proposed Risk Evaluation Rule, EPA likewise construed TSCA to require it to conduct risk

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evaluations on "the chemical substance," "not [on] individual conditions of use." ER 63. EPA's focus on the total risk posed by each chemical informed critical aspects of the proposed Rules.

First, the proposed Rules required EPA to consider during both prioritization and risk evaluation "*all* known, intended, and reasonably foreseen activities associated with the subject chemical substance," i.e., "*all* … activities that constitute the conditions of use within the meaning of [the statutory definition]." *Id.* (emphases added); *see* ER 582, 588. EPA applied the requirement to evaluate all of a chemical's conditions of use to both EPA-initiated and manufacturer-requested risk evaluations. ER 60, 75-76. As a result, the proposed Risk Evaluation Rule required manufacturers requesting risk evaluations to provide EPA with "all [reasonably available] information that is necessary for EPA to conduct a risk evaluation addressing all the circumstances that constitute [the chemical's] conditions of use." ER 74.

Second, the proposed Risk Evaluation Rule required EPA to make a single, final risk determination of whether "the chemical substance presents an unreasonable risk of injury." ER 78, 63.

B. Influence of Dr. Nancy Beck over the final Framework Rules

Until at least April 12, 2017, EPA continued to interpret TSCA as requiring risk evaluations to "encompass all" of a chemical's conditions of use, and relied on

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that interpretation in denying several citizen petitions under TSCA. *See* 82 Fed. Reg. 17,601, 17,603 (Apr. 12, 2017).

Shortly thereafter, however, the Trump Administration appointed Dr. Nancy Beck as Deputy Assistant Administrator for EPA's Office of Chemical Safety and Pollution Prevention, which oversees the TSCA program. Since joining EPA in late April 2017, Dr. Beck has been the senior political appointee under the Administrator responsible for all aspects of EPA's implementation of TSCA. For the five years immediately before joining EPA, Dr. Beck was the Senior Director for Regulatory Science Policy at Respondent-Intervenor American Chemistry Council (ACC). MA 63.[4] A registered lobbying organization, ACC is the principal advocacy association representing the nation's largest and most influential chemical manufacturers. *See* MA 53, 67-68; ER 82.

As one of ACC's chief advocates regarding EPA's implementation of TSCA, Dr. Beck presented ACC's recommendations for the Framework Rules at an EPA public meeting on August 9, 2016, and signed ACC's August 2016 comments elaborating on its desired approach for the Rules. ER 79, 82. ACC and Dr. Beck urged EPA to focus on subsets of chemicals' conditions of use in its risk

[4] Petitioners use "MA" to refer to the Motion Appendix (ECF No. 43-2) filed with their Motion to Complete the Administrative Records. The Motion requests that the Court compel EPA to complete the administrative records with the documents identified in paragraphs 3 through 20 of the Marks Declaration, as well as additional documents that EPA omitted from its certified records.

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evaluations. ER 86; *see also* MA 13, 17-18 (showing Dr. Beck's participation in a November 2016 meeting at the Office of Management and Budget at which ACC recommended that EPA not evaluate all conditions of use and instead focus on those uses "that present the highest likelihood of potential concern"). ACC's March 2017 comments on the Framework Rules, written while Dr. Beck remained at ACC, repeated the same positions as Dr. Beck's previous comments, including that EPA need not "include 'all' conditions of use in any particular risk evaluation." ER 137; *see* ER 606-07. Because of this prior advocacy on ACC's behalf, EPA's ethics office "advised" Dr. Beck that she "cannot participate in any meetings, discussions, or decisions that relate to any individual ACC comment nor attend any meeting at which ACC is present." MA 88.

Nonetheless, after Dr. Beck's arrival at EPA, the Agency abruptly reversed its interpretation of TSCA's requirements. The final Framework Rules upend EPA's prior approach to risk evaluations and significantly narrow the Agency's interpretation of the meaning of "the conditions of use." This altered approach ignored recommendations and concerns raised by career agency staff. *See* MA 25-27, 29-30. Many of the changes to the proposed Rules mirror ACC's specific requests, in many instances word for word. *See* MA 528-539.

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C. The final Rules

The Framework Rules reject the comprehensive, substance-based approach of the proposed Rules.

First, EPA now asserts in the Risk Evaluation Rule that TSCA grants EPA "discretion" to exclude conditions of use from its risk evaluation of a chemical. ER 4. The Rule establishes no criteria for such exclusions. This pick-and-choose interpretation extends to the Rule's provisions allowing manufacturers to request risk evaluations limited to the conditions of use they wish to include. 40 C.F.R. § 702.37(b)(3); *see* ER 12.

Second, the Risk Evaluation Rule allows EPA to conduct piecemeal risk evaluations for a chemical, without determining whether the "chemical substance" poses an unreasonable risk. Instead, the Rule directs EPA to determine whether individual conditions of use in isolation pose unreasonable risks. 40 C.F.R. §§ 702.47 (EPA "will determine whether the chemical substance presents an unreasonable risk … *under each condition of uses* [sic] within the scope of the risk evaluation" (emphasis added)), 702.49(d); *see* ER 19.

Third, the Framework Rules rewrite the statutory definition of "conditions of use" to omit consideration of a chemical's ongoing and future uses and related disposals if manufacturing, processing, and distribution for those specific uses are no longer occurring. ER 4-5, 31. EPA misleadingly labels these omitted activities

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"legacy uses," "associated disposal," and "legacy disposal." ER 4-5.

The Rules also limit EPA's ability to collect and consider reasonably available information necessary to inform its decisions under TSCA.

III. Risk evaluation actions to date

In December 2016, EPA selected the first ten chemicals to undergo risk evaluations under the amended TSCA and began those evaluations. 81 Fed. Reg. 91,927 (Dec. 19, 2016); *see* 15 U.S.C. § 2605(b)(2)(A). EPA released the scopes for these ten chemicals contemporaneously with the final Framework Rules. MA 520-22. The scopes rely on EPA's revised interpretations of TSCA incorporated into the Framework Rules. *See* 82 Fed. Reg. 31,592, 31,593 (July 7, 2017).

STANDARD OF REVIEW

The standard set forth in the Administrative Procedure Act applies to the Court's review of EPA rules implementing TSCA. 15 U.S.C. § 2618(c)(1). Under this standard, courts must "hold unlawful and set aside" agency action and conclusions "found to be … arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2).

When reviewing whether an agency's interpretation of a statute is lawful, the Court follows the test established in *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984). *City of L.A. v. U.S. Dep't of Commerce*, 307 F.3d 859, 868 (9th Cir. 2002). If Congress has spoken directly to

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the precise question at issue, the Court must give effect to Congress's unambiguously expressed intent. *Chevron*, 467 U.S. at 843 & n.9; *Akhtar v. Burzynski*, 384 F.3d 1193, 1198 (9th Cir. 2004). If the statute is silent or ambiguous, a court will defer to an agency's reasonable interpretation. *Chevron*, 467 U.S. at 843 & n.9.

In addition, agency action is arbitrary and capricious where an agency "entirely fail[s] to consider an important aspect of the problem" or fails to articulate a "'rational connection between the facts found and the choice made.'" *Motor Vehicle Mfrs. Ass'n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)). A court's review of agency action, while "deferential," must be "thorough, probing, [and] in-depth." *Ranchers Cattleman Action Legal Fund United Stockgrowers of Am. v. U.S. Dep't of Agric.*, 415 F.3d 1078, 1093 (9th Cir. 2005) (internal quotation marks omitted).

SUMMARY OF ARGUMENT

1. EPA's claim of authority to exclude conditions of use and their resulting exposures from risk evaluations violates TSCA's plain text, structure, and purpose. The directive to "determine whether *a chemical substance* presents an unreasonable risk" requires an evaluation of the chemical's total risk. And the phrase "under *the* conditions of use" unambiguously means *all* of the chemical's

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conditions of use. Several provisions of TSCA confirm Congress's intent. First, when Congress intended EPA to act on fewer than all conditions of use, it expressly provided for such action. Second, Congress created a narrow exception allowing EPA to regulate certain chemicals based on previously completed risk assessments limited to a subset of conditions of use; this exception confirms that the new law otherwise requires comprehensive risk evaluations. Third, TSCA specifies in detail how EPA is to prioritize chemicals and evaluate their risks, but does not provide EPA with any criteria to eliminate conditions of use. Moreover, excluding conditions of use will frustrate TSCA's purpose of preventing unreasonable risks to health by underestimating risk, especially to vulnerable subpopulations. EPA's interpretation fails under *Chevron* and reflects arbitrary and capricious reasoning.

2. EPA also asserts authority to find that individual conditions of use, standing alone, do not present an unreasonable risk, and that it need not make a risk determination for a chemical substance as a whole. EPA's use-by-use approach cannot be reconciled with TSCA's requirement that EPA make a single, holistic risk determination on "a chemical substance."

3. EPA unlawfully rewrites the definition of "conditions of use" to omit a chemical's current and future use and disposal if the chemical's manufacture, processing, and distribution for that specific use are not ongoing. Congress's

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inclusion of "use" and "disposal" as "conditions of use" forecloses this construction. 15 U.S.C. § 2602(4). Moreover, Congress consciously allowed EPA to prioritize and evaluate chemicals that have not been manufactured in the ten years prior to passage of the TSCA amendments, i.e., chemicals that have *only* conditions of use ("use" and "disposal") that EPA claims it may omit from analysis. EPA's rewrite thus finds no support in the text or structure of TSCA.

4. The Framework Rules are inconsistent with EPA's duty to "take into consideration" all "reasonably available" information when prioritizing chemicals and conducting risk evaluations. 15 U.S.C. § 2625(k). For example, the Risk Evaluation Rule penalizes any "incomplete" public submissions, chilling public participation. The Rule also impermissibly limits the information manufacturers must provide when requesting a risk evaluation, allowing them to withhold relevant information about a chemical. These information-limiting provisions inhibit the scientifically sound decisions EPA is required to make under section 6.

5. Petitioners have standing to challenge the Framework Rules because their members face a credible threat of injury from EPA's unlawful approach to prioritizing chemicals and evaluating their risks. Petitioners also have informational standing to challenge the Risk Evaluation Rule, and some Petitioners have organizational standing to challenge that Rule.

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ARGUMENT

I. The Framework Rules violate TSCA's mandate that risk evaluations consider all of a chemical's conditions of use

Under TSCA, EPA must conduct risk evaluations to determine whether "*a chemical substance* presents an unreasonable risk … under *the conditions of use*." 15 U.S.C. § 2605(b)(4)(A) (emphases added). This directive expresses Congress's clear intent that EPA evaluate the risks posed by "a chemical substance" as a whole, taking into account all circumstances comprising "the conditions of use" of the chemical.

Ignoring Congress's unambiguous direction, the Framework Rules grant EPA unfettered "discretion" to pick and choose which conditions of use it will include in each risk evaluation. ER 4-5. In other words, EPA claims authority to "exclude certain activities that EPA has determined to be conditions of use" from risk evaluations. ER 4.[5] The Risk Evaluation Rule codifies this pick-and-choose approach by providing that the scope of each evaluation will "include" only "[t]he

[5] To the extent the Prioritization Rule authorizes EPA to exclude conditions of use from consideration when designating a chemical as high- or low-priority, the Rule is likewise unlawful. *See* ER 31 (referring to EPA's "discretion to 'determine' the conditions of use" for each chemical); *compare* 40 C.F.R. § 702.9(f) (basing proposed low-priority designations on "the proposed conclusion that the chemical substance meets the definition of Low-Priority Substance … *under the activities that [EPA] determines constitute conditions of use*" (emphasis added)), *with* ER 588 (basing low-priority designations on consideration of "all uses that [EPA] determines constitute conditions of use").

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condition(s) of use, as determined by the Administrator, *that the EPA plans to consider*," giving EPA carte blanche to exclude any conditions of use it chooses. 40 C.F.R. § 702.41(c)(1) (emphasis added). The Rule repeatedly refers to "the conditions of use *within* the scope of the evaluation," indicating that some conditions of use are outside the evaluation's scope. 40 C.F.R. §§ 702.41(a)(5), (a)(8), (a)(9), (c)(4)(i), (c)(4)(iii), (d)(2); 702.49(b), (c), (d) (emphasis added). Similarly, the Rule allows EPA to limit an evaluation requested by a manufacturer to those conditions of use "identified in the request," and other limited conditions of use that "warrant inclusion." *Id.* § 702.37(e)(3); *see id.* § 702.37(b)(3).

EPA points to a smorgasbord of potential exposure pathways it may exclude, while also leaving open the possibility of other exclusions as well. *See* ER 5 (asserting it may exclude a chemical's presence as an "impurity"), 183-85 (suggesting it may exclude use as an intermediate chemical during manufacturing, the incidental manufacturing of a chemical as a byproduct, and uses "where other agencies hold jurisdiction").

EPA's interpretation is not only contrary to the "particular statutory language at issue" and "the language and the design of the statute as a whole," *McCarthy v. Bronson*, 500 U.S. 136, 139 (1991) (quoting *K Mart Corp. v. Cartier, Inc.*, 486 U.S. 281, 291 (1988)), but also frustrates TSCA's purposes by ignoring exposures and underestimating risks posed by chemicals, *see Wilderness Soc'y v.*

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U.S. Fish & Wildlife Servs., 353 F.3d 1051, 1060 (9th Cir. 2003) (en banc). If EPA excludes conditions of use during prioritization and risk evaluations, it cannot fulfill TSCA's command to determine whether "a chemical substance" poses an unreasonable risk to health or the environment. 15 U.S.C. § 2605(b)(4)(A). The Court must give effect to Congress's "unambiguously expressed intent" by setting aside the provisions of the Framework Rules that reflect EPA's illegal approach. *Chevron*, 467 U.S. at 843.

A. TSCA's plain language requires EPA to include all conditions of use in prioritization and risk evaluations

The starting point for construing TSCA "is the language of the statute itself." *Grp. Life & Health Ins. Co. v. Royal Drug Co.*, 440 U.S. 205, 210 (1979).

1. TSCA requires priority designations and risk evaluations to focus on "a chemical substance" as a whole

Congress consistently used the phrase "a chemical substance" to describe the object of priority designations and risk evaluations. 15 U.S.C. § 2605(b)(1)-(4), (i) (using the phrase fourteen times). This language requires EPA to consider all hazards and exposures that contribute to the total risk presented by the chemical substance as a whole.

This whole-substance focus begins during prioritization. The definitions of high- and low-priority substances make clear that it is the "substance" that receives the designation, not selected uses. *See id.* § 2605(b)(1)(B). As EPA recognized in

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the Prioritization Rule, "[t]he statute is clear that EPA is to designate the priority of the 'chemical substance'—not a condition of use for a chemical substance." ER 31 (citing 15 U.S.C. § 2605(b)(1)(A)).

EPA must also conduct risk evaluations on "a chemical substance" as a whole. For example, TSCA provides that "[u]pon designating a chemical substance as a high-priority substance, the Administrator shall initiate a risk evaluation on *the substance*." 15 U.S.C. § 2605(b)(3)(A) (emphasis added). Similarly, the statute directs EPA to determine either that "*a chemical substance* presents" or "does not present an unreasonable risk." *Id.* § 2605(i)(1)-(2) (emphasis added). Congress also uses the phrase "a chemical substance" or "chemical substances" in many other places in TSCA's risk evaluation provisions. *See, e.g.*, *id.* § 2605(b)(4)(G) (setting deadlines for completing evaluation for "a chemical substance"), (b)(2)(A), (b)(2)(B), (b)(3)(A), (c)(1).

Together, these provisions show that "the statute requires" EPA to determine "whether a chemical substance, as a whole, presents an unreasonable risk or [sic] injury." ER 63-64. As EPA previously concluded, an interpretation allowing the Agency to evaluate "merely a subset of individual uses" is "a strained reading" of section 6(b). *Id.*

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2. The phrase "the conditions of use" means *all* conditions of use

By requiring EPA to determine whether a chemical substance presents an unreasonable risk "under *the* conditions of use," 15 U.S.C. § 2605(b)(4)(A) (emphasis added), TSCA is unambiguous: EPA's evaluation must include *all* conditions of use of the chemical. The "definite article 'the' particularizes the subject which it precedes," in contrast to the "indefinite or generalizing force of 'a.'" *In re Cardelucci*, 285 F.3d 1231, 1234 (9th Cir. 2002) (quoting Black's Law Dictionary 1477 (6th ed. 1990)). When "the" precedes a collective or plural noun, it is equivalent to "all." *E.g.*, *Dutcher v. Matheson*, 840 F.3d 1183, 1194 (10th Cir. 2016); *Kaufman v. Allstate N.J. Ins. Co.*, 561 F.3d 144, 155 (3d Cir. 2009); *Frazier v. Pioneer Americas LLC*, 455 F.3d 542, 546 (5th Cir. 2006). Accordingly, the phrase "the conditions of use" means *all* conditions of use.

When Congress intended EPA to act on fewer than all of a chemical's conditions of use, it used different words to convey that intent. *See SEC v. McCarthy*, 322 F.3d 650, 656 (9th Cir. 2003). Congress allowed EPA to grant exemptions from risk management rules for "a specific condition of use" of a chemical, 15 U.S.C. § 2605(g)(1); directed EPA to consider reasonably available alternatives when deciding whether to ban or restrict "a specific condition of use," *id.* § 2605(c)(2)(C); and permitted EPA to allow test marketing for "specific conditions of use" of new chemicals in some circumstances, *id.* § 2604(h); *see also*

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id. § 2613(b)(4)(B)(i) (referring to "a specific condition of use"). The Court "must assume that this difference in language is legally significant." *Spencer Enters., Inc. v. United States*, 345 F.3d 683, 689 (9th Cir. 2003).

B. EPA's conclusion that it may exclude conditions of use is contrary to TSCA's structure

Because courts "construe statutes, not isolated provisions," *King v. Burwell*, 135 S. Ct. 2480, 2489 (2015) (internal quotation marks omitted), "the words of a statute must be read in their context and with a view to their place in the overall statutory scheme," *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 133 (2000) (internal quotation marks omitted).

1. EPA's pick-and-choose approach cannot be squared with the overall structure of TSCA

As EPA concluded in its proposed Risk Evaluation Rule, that TSCA "provides no criteria for EPA to apply" shows that the Agency does not have "license to choose among conditions of use." ER 64. The precision with which Congress prescribed EPA's implementation of section 6 supports this reading. Section 6 lays out detailed directions for EPA. *See* 15 U.S.C. § 2605(b)(1)(A) (mandating considerations for priority designations), (b)(4)(D) (identifying risk factors to include in a risk evaluation's scope), (b)(4)(F)(i)-(v) (detailing requirements for conducting risk evaluations); *see also id.* § 2605(a) (specifying possible risk management measures). These provisions indicate that Congress did

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not mean to allow EPA to exclude conditions of use from prioritization or risk evaluation without any criteria or instruction. *Cf. NRDC, Inc. v. EPA*, 863 F.2d 1420, 1432 (9th Cir. 1988) (invalidating regulatory procedure that "is wholly silent as to what factors the agency is to consider in granting exceptions" and provides "no discernible standard [for] limit[ing] th[at] discretion").

Indeed, when Congress intended EPA to exercise discretion under TSCA, it said so explicitly. *See, e.g.*, 15 U.S.C. §§ 2613(f) (granting EPA "[d]iscretion" in handling claims to protect confidential information), 2608(a) (instructing EPA, if it "determines, in the Administrator's discretion," that an unreasonable risk may be prevented under a federal law administered by another agency, to notify the agency), 2608(b), 2605(b)(4)(E)(iv)(II). That Congress purposefully included the language of discretion "in one section of the statute but omit[ted] it in another section of the same Act" shows that Congress did not intend EPA to use discretion to pick and choose which conditions of use to consider in prioritization and risk evaluation. *Hernandez v. Ashcroft*, 345 F.3d 824, 834 (9th Cir. 2003) (quoting *Andreiu v. Ashcroft*, 253 F.3d 477, 480 (9th Cir. 2001) (en banc)).

Underscoring that the pick-and-choose approach is inconsistent with TSCA's structure is EPA's suggestion that it may exclude "[u]ses where other agencies hold jurisdiction." ER 5. Congress is plainly aware, for example, that the Occupational Safety and Health Administration (OSHA) also has jurisdiction over

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worker safety, but section 6(b), when read with the definition of "potentially exposed or susceptible subpopulation," specifically requires EPA to evaluate the risks to workers. 15 U.S.C. §§ 2602(12), 2605(b)(4)(A). Further, section 9(c) permits concurrent EPA and OSHA regulation over working conditions. *See id.* § 2608(c). And, section 9 expressly contemplates that EPA may—only after it determines that a chemical presents an unreasonable risk—determine that the risk "may be prevented or reduced to a sufficient extent by action taken under a Federal law not administered" by EPA. *Id.* § 2608(a). These provisions show that Congress intended EPA to evaluate all conditions of use, even those potentially under the jurisdiction of other agencies. Indeed, where Congress intended to exclude uses of a chemical because they fall under the jurisdiction of another agency, it did so expressly. *See id.* § 2602(2)(B) (excluding from the definition of "chemical substance" uses regulated by other agencies under statutes such as the Food, Drug, and Cosmetic Act).

Similarly, EPA suggests that it may exclude conditions of use for reasons that bear no relationship to risk. *See* ER 5, 183-85. Such exclusions violate TSCA's requirement that EPA evaluate a chemical's risk "without consideration of costs or other nonrisk factors." 15 U.S.C. § 2605(b)(4)(A).

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2. TSCA's exception allowing certain partial risk evaluations confirms that comprehensive risk evaluations are the general rule

The express, limited exception Congress created to allow EPA to act on partial risk evaluations conducted prior to the 2016 TSCA amendments further confirms that Congress otherwise intended EPA to consider all conditions of use in risk evaluations. *See* 15 U.S.C. § 2625(*l*)(4). Section 26(*l*)(4) authorizes EPA to issue risk management rules for chemicals that, prior to the 2016 amendments, had been subject to partial risk evaluations based on a subset of conditions of use.[6] *Id.* Congress enacted this provision in direct response to concerns raised by EPA during the legislative process that partial risk evaluations were "simply not contemplated under the House and Senate bills." *See* MA 541. EPA noted that, absent this carve-out, the pending legislation would require EPA "to assess a chemical in its entirety, based on *all* conditions of use," and would preclude EPA from acting on its 2014 partial risk evaluations. *See* MA 540-42. Construing TSCA to allow EPA to conduct partial risk evaluations outside of this narrow carve-out, as the Framework Rules do, impermissibly renders section 26(*l*)(4) meaningless. *See Bilski v. Kappos*, 561 U.S. 593, 607-08 (2010). Although EPA now espouses a new view of this statutory language, its statement "to Congress …

[6] *E.g.*, trichloroethylene, 82 Fed. Reg. 7432, 7433 (proposed Jan. 19, 2017); methylene chloride and n-methylpyrrolidone, 82 Fed. Reg. 7464, 7465 (proposed Jan. 19, 2017).

at the very time it presented its own amendment to the Congress as one it urged for adoption … [is] more reliable." *United States v. One Bell Jet Ranger II Helicopter*, 943 F.2d 1121, 1126 (9th Cir. 1991).

C. Excluding conditions of use will frustrate TSCA's aim to prevent unreasonable risks to health from toxic chemicals

The meaning of statutory language "depends on context," including the statute's objectives. *Brower v. Evans*, 257 F.3d 1058, 1065 (9th Cir. 2001) (internal quotation marks omitted); *see Crandon v. United States*, 494 U.S. 152, 158 (1990). TSCA's overriding purpose is to eliminate "unreasonable risk[s] of injury to health or the environment" associated with chemicals, *see* 15 U.S.C. §§ 2601(b), 2605(a), by authorizing EPA to "look comprehensively at the hazards associated with the chemical," S. Rep. No. 94-698, at 2; *supra* p. 6. Congress amended TSCA to promote "effective implementation" of the 1976 law's objectives. *See* S. Rep. No. 114-67, at 2. Thus, the TSCA amendments reaffirm EPA's obligation to comprehensively evaluate the risks of chemicals, for example by defining "conditions of use" broadly to encompass a chemical's whole lifecycle and mandating that EPA protect vulnerable subpopulations. *See* 15 U.S.C. §§ 2602(4), 2605(b)(4)(A).

Preventing unreasonable risk from a chemical requires EPA to consider all sources and pathways of exposure. As one of EPA's risk assessment handbooks explains, individuals may be exposed to chemicals "through more than one

pathway. … [T]o achieve effective risk assessment and risk management decisions, *all* media and routes of exposure should be assessed." ER 248 (emphasis added). As public commenters explained, "a worker may be exposed to a chemical both at home and in the workplace, while an infant may be exposed to a chemical both through breast milk and through household dust." ER 253; *see also* ER 260. Additionally, an individual's exposure to a chemical through a single pathway (e.g., drinking water) may result from multiple uses of the chemical. *See* MA 29-30; ER 269, 272. "Even small exposures can add up over time to cause serious harm." ER 249. As EPA explained in the proposed Risk Evaluation Rule, if the Agency "were free to base its determination of whether a chemical substance, as a whole, presents an unreasonable risk … on merely a subset of individual uses, it could, for example, determine that a chemical substance with 10 known uses does not present an unreasonable risk of injury" after evaluating "a single one of those uses," while neglecting to evaluate other uses that may contribute to the chemical's risks. ER 63-64. This principle also explains why EPA must designate a chemical as high-priority if it lacks sufficient information to determine whether the chemical may present an unreasonable risk (including an unreasonable risk to vulnerable subpopulations). 15 U.S.C. § 2605(b)(2)(B). EPA cannot rule out the possibility that a chemical presents an unreasonable risk unless it has sufficient information on all conditions of use, because each condition of use

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may contribute to the chemical's total risk.

For the same reasons, excluding uses undermines the TSCA amendments' express commitment to protecting "potentially exposed or susceptible subpopulations," such as children, the elderly, and workers, from unreasonable chemical risks. *See* 15 U.S.C. § 2605(b)(1)(B)(i), (b)(4)(A), (b)(4)(F)(i). These subpopulations are defined by their "greater susceptibility or greater exposure" to chemicals, which may lead them to be "at greater risk than the general population of adverse health effects from exposure to a chemical." *Id.* § 2602(12). They face greater harm from low-level exposures, and may have more frequent exposures, from more sources, over time than the general population. *See, e.g.*, ER 275, 278 (children have "unique vulnerabilities to toxic chemicals," especially from "chronic, low-dose exposures that may occur at [developmentally] significant times"), 280-81, 284-87 (communities reliant on subsistence fishing and "wild foods" may face greater exposure to pollutants), 289, 290-91 (bio-accumulation of toxic chemicals in fish may increase exposure to individuals reliant on a "traditional subsistence diet"); *see also* ER 262-63, 298. To assess exposures to these vulnerable subpopulations in "real-world situations," EPA must consider "the totality of exposures from multiple pathways." ER 323 (citing U.S. EPA, Guidelines for Human Exposure Assessment, Risk Assessment Forum, Peer Review Draft (2016)).

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In sum, TSCA's text, structure, and purpose show that Congress spoke clearly to require EPA to include all conditions of use in making a priority designation and conducting a risk evaluation of a chemical substance.

D. EPA's asserted rationales in support of the pick-and-choose approach fail

1. The two statutory phrases EPA relies on do not grant it discretion to pick and choose

Neither of the two statutory phrases EPA plucks out of context grants it discretion to exclude conditions of use.

First, EPA's contention that the phrase "as determined by the Administrator" confers pick-and-choose authority is mistaken. *See* ER 4-5. This phrase merely confirms that EPA has a role in identifying the "circumstances" comprising a chemical's conditions of use under the statutory definition through factual investigation. *See* ER 4 (acknowledging that the "as determined by" phrase refers to a "largely … factual determination").

But EPA's role in "determin[ing]" the conditions of use is a limited one. The phrase "as determined by the Administrator" does not exist in a vacuum; the clause interrupts and modifies the rest of the definition. 15 U.S.C. § 2602(4). Thus, what EPA must "determine," i.e., identify by factual investigation, is bounded by the rest of the definition—the circumstances of a chemical's

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"intended, known, or reasonably foreseen" manufacture, processing, distribution, use, and disposal. *See id.* The phrase "as determined by" thus provides no authority for EPA to circumvent the statute's clear definition. *See U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 631-32 (D.C. Cir. 2016) (rejecting reliance on statutory phrase "as determined by" to support "claim[ed] discretion"), *on reh'g en banc*, 671 F. App'x 822 (D.C. Cir. 2016), *and on reh'g en banc in part*, 671 F. App'x 824 (D.C. Cir. 2016).

Second, EPA cannot justify its pick-and-choose approach based on section 6(b)(4)(D), which requires EPA to "publish the scope of the risk evaluation …, including the hazards, exposures, conditions of use, and the potentially exposed or susceptible subpopulations the Administrator expects to consider." 15 U.S.C. § 2605(b)(4)(D). The phrase "expects to consider," understood in its ordinary meaning, does not provide discretion to pick and choose among the conditions of use. *See* Oxford American Dictionary 609 (3d ed. 2010) ("expect" means to "[r]egard (something) as likely to happen"); *supra* p. 27 (Congress used the word "discretion" when it meant to grant discretion). To the contrary, the term indicates only that EPA must describe the conditions of use it has identified through its fact-gathering. As EPA stated in the proposed rule, section 6(b)(4)(D) is "best read as directing the Agency to identify the uses and other activities that it has determined constitute the conditions of use, not as a license to choose among conditions of

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use." ER 64. If "expects to consider" were to grant EPA broad discretion to pick-and-choose and also modified all the preceding nouns, then EPA would also have broad discretion to exclude from the risk evaluation any hazards of the chemical (e.g., carcinogenic effects) that EPA chooses. But this interpretation is absurd.[7]

Moreover, contrary to EPA's assertions, TSCA's legislative history does not support the pick-and-choose approach. EPA relies heavily on a floor statement by a single senator to justify its interpretation, *see* ER 3, while ignoring a contradictory floor statement from four other senators, *see* 114 Cong. Rec. S3518-19 (daily ed. June 7, 2016). In light of the legislators' "contradictory account[s]," the statement of a single senator is not dispositive as to statutory meaning, especially when the statement is contrary to "clear statutory language." *NLRB v. SW Gen., Inc.*, 137 S. Ct. 929, 942-43 (2017); *Milner v. Dep't of Navy*, 562 U.S. 562, 572 (2011).

Even if TSCA were ambiguous, EPA's interpretation of the phrases "as determined by" and "expects to consider" as giving it carte blanche to exclude conditions of use is patently unreasonable. This is especially so because EPA's asserted discretion would be exercised even before conducting the evaluation that

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[7] Alternatively, under the rule of the last antecedent, the phrase "the Administrator expects to consider" does not even modify "conditions of use." *See Barnhart v. Thomas*, 540 U.S. 20, 26 (2003); *Nw. Forest Res. Council v. Glickman*, 82 F.3d 825, 832 (9th Cir. 1996), *as amended on denial of reh'g* (May 30, 1996).

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should answer how significant a risk the conditions of use actually present. If upheld, EPA's interpretation would give the Agency license to exclude *any* condition of use for *any* reason during (or even before) prioritization or risk evaluation. This irrational interpretation would undermine the integrity and protectiveness of those processes and cannot be squared with TSCA. Additionally, the pick-and-choose approach gives EPA license to implement TSCA in a manner wholly lacking in reasoned decision-making, rendering it arbitrary and capricious. *Cf. NRDC, Inc. v. EPA*, 863 F.2d at 1432.

2. EPA's view that it has unfettered discretion to exclude conditions of use is impermissible and lacks a rational basis

Implicitly conceding that Congress did not grant it unlimited discretion, EPA asserts that it intends to focus on evaluating "the conditions of use that raise greatest potential for risk." ER 3; *see* ER 180 (same); *see also* MA 17-18 (ACC handout urging EPA to limit risk evaluations to those conditions of use that "present the highest likelihood of potential concern"). EPA's non-binding intention cannot rescue the Framework Rules. First, no language in TSCA limits EPA to this "greatest potential for risk" focus. Nor does EPA point to any statutory terms that even arguably supply such a limitation.

Moreover, the Risk Evaluation Rule and the scopes for the first ten chemicals show that EPA intends to exclude conditions of use without any risk-based rationale (i.e., based on "nonrisk factors," *contra* 15 U.S.C. § 2605(b)(4)(A))

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and despite evidence that they do in fact present a serious potential for risk. For example, EPA indicates that it will exclude conditions of use of 1,4-dioxane when it is manufactured incidentally as a byproduct, a criterion with no connection to the level of risk presented, *see* 75 Fed. Reg. 49,656, 49,676 (proposed Aug. 13, 2010) (EPA "does not believe byproducts inherently pose lower exposures or risks than other manufactured chemical substances"), and that EPA itself has concluded falls within TSCA's jurisdiction, *see* 76 Fed. Reg. 50,816, 50,832 (Aug. 16, 2011). This exclusion of byproduct uses means that 1,4-dioxane's presence in many "commercial and consumer products," such as paints, household cleaners and detergents, and textile dyes, will not be evaluated, although these uses may present meaningful risks for some populations. MA 157, 170; ER 367; *cf.* ER 701. These excluded uses illustrate that EPA's "greatest potential for risk" rationale does not actually govern its exclusions.

In any event, focusing on only those conditions of use that EPA deems pose "the greatest potential for risk" is itself inconsistent with TSCA. The statute's plain terms require consideration of all conditions of use, not just the riskiest conditions. *See supra* pp. 23-26. There would be no way for EPA to determine soundly which conditions of use pose the greatest potential for risk *before* beginning the evaluation whose purpose is to assess the risks of those conditions of use. And it would be unreasonable to interpret the statute as allowing EPA to

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prioritize chemicals or conduct risk evaluations without considering risks from multiple (sometimes relatively low-dose) exposures to the same chemical. This exclusionary approach would prevent EPA from accurately evaluating total risks to vulnerable subpopulations like children, for whom low doses can pose significant risks, especially when they add up. *See supra* p. 32.

Likewise, EPA's "greatest potential for risk" theory is arbitrary and capricious because EPA has not provided a rational explanation to reconcile its pick-and-choose approach with TSCA's mandate to determine whether "a chemical substance" poses an unreasonable risk, including an unreasonable risk to vulnerable subpopulations, and to issue risk management rules to eliminate any such risks. *See State Farm*, 463 U.S. at 43.

Nor can EPA justify its pick-and-choose interpretation by reference to concerns about completing risk evaluations within "statutory deadlines." ER 3-4. This is not a legitimate excuse to disregard plain statutory language. *See Portland Gen. Elec. Co. v. Bonneville Power Admin.*, 501 F.3d 1009, 1026 (9th Cir. 2007). In any event, EPA has not explained its turnaround from its factual conclusion in the proposed Rule that including all conditions of use would be "manageable given the statutory deadlines." ER 64.

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II. EPA's use-by-use approach to risk determinations contravenes TSCA's requirement that EPA make a holistic risk determination for each chemical

EPA violates TSCA by asserting authority to determine the risk of individual conditions of use in isolation, not the chemical substance holistically. *See* 40 C.F.R. §§ 702.41(a)(9), 702.47, 702.49(d); ER 19. This aspect of the Risk Evaluation Rule flouts TSCA's command to determine whether "a chemical substance" presents an unreasonable risk, 15 U.S.C. § 2605(b)(4)(A), and defeats TSCA's purpose of preventing harms from toxic chemicals, *see supra* pp. 30-33. The holistic risk determination demanded by the statute must take into account that multiple exposures to the same chemical from different sources will increase risk. *See* 15 U.S.C. § 2605(b)(4)(F). If EPA considers each pathway to a chemical in isolation, as its Rule permits, it could determine that no single use poses an unreasonable risk, even where the totality of uses presents an unreasonable risk.

This use-by-use approach to risk determinations also cannot be squared with section 6(a), which requires EPA to issue a risk management rule if it determines that "any combination of" a chemical's "manufacture, processing, distribution in commerce, use, or disposal" presents an unreasonable risk. *Id.* § 2605(a). EPA cannot rule out the possibility that a combination of a chemical's conditions of use presents an unreasonable risk until after it has considered all of its conditions of use collectively. Sections 702.41(a)(9), 702.47, and 702.49(d) in the Risk

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Evaluation Rule are thus contrary to TSCA and must be set aside.

Under some circumstances EPA may determine that a particular use of a chemical *does* present an unreasonable risk before completing its risk determination. *See* 15 U.S.C. § 2605(a). This is because a "single use" may "present[] an unreasonable risk of injury for the population as a whole or for a susceptible subpopulation … regardless of the risk posed by other uses." ER 66. If EPA finds that a single use creates an unreasonable risk of harm, TSCA allows EPA to act quickly to protect public health, whether or not it has completed a risk determination for all uses, as EPA acknowledges. ER 15; *see* 15 U.S.C. § 2605(a), (b)(4)(A).

The converse, however, is not true. *See supra* pp. 30-33. Because the Risk Evaluation Rule allows EPA to determine that specific uses of a chemical do not pose an unreasonable risk before completing a comprehensive determination of the risks posed by the chemical, the Rule is contrary to law. *See Chevron*, 467 U.S. at 842-43.

III. EPA has unlawfully rewritten the statutory definition of "conditions of use" to omit certain uses and disposals

EPA rewrites Congress's unambiguous definition of "conditions of use" to significantly narrow the conditions of use the Agency will consider when making priority designations and conducting risk evaluations. ER 4, 5, 31. In contravention of the statutory definition, *see* 15 U.S.C. § 2602(4), EPA concludes

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that a chemical's ongoing use and disposal are *not* conditions of use if the chemical's manufacture, processing, or distribution for that specific use are not "prospective or on-going," ER 5. Moreover, EPA constricts the meaning of "disposal" to include only the one-time event when a chemical or product containing the chemical is placed in a landfill or other waste facility. Based on these contortions, EPA categorically omits from consideration three types of chemicals' conditions of use, which EPA misleadingly labels "legacy use," "associated disposal," and "legacy disposal." ER 4-5; *see* ER 31. This "rewriting [of TSCA's] unambiguous statutory terms" cannot stand. *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2445 (2014). Congress's clear definition controls the meaning of "conditions of use." *See Dig. Realty Tr., Inc. v. Somers*, 138 S. Ct. 767, 776 (2018); *United States v. Olson*, 856 F.3d 1216, 1223 (9th Cir. 2017).

A. A chemical's "conditions of use" include ongoing and future use and disposal under TSCA's plain language

TSCA's unambiguous text precludes EPA's conclusion that the term "conditions of use" ceases to apply to ongoing use and disposal once a chemical is no longer manufactured, processed, or distributed for a specific use. ER 4-5, 31. Although EPA asserts that TSCA is "ambiguous" and that "[n]o statutory text expressly addresses" the issue, ER 4, this is simply not so. A chemical's conditions of use include "the circumstances" under which the chemical is "known, or reasonably foreseen to be manufactured, processed, distributed in

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commerce, *used, or disposed of*." 15 U.S.C. § 2602(4) (emphasis added). Because the definition uses a disjunctive "or" list, each lifecycle stage of a chemical, standing alone, is a condition of use, even if some of the chemical's lifecycle stages have been discontinued. *See, e.g.*, *Horne v. Flores*, 557 U.S. 433, 454 (2009). EPA's construction robs the words "use" and "disposal" of their clear, independent role in the statute. The Court should reject EPA's attempt to "manufacture ambiguity" out of TSCA's plain language. *Aragon-Salazar v. Holder*, 769 F.3d 699, 706 (9th Cir. 2014).

Each of the three categories EPA concludes are *not* conditions of use falls squarely within the plain meaning of the definition. First, what EPA confusingly labels "legacy uses" includes ongoing and future uses of a chemical that is no longer manufactured, processed, or distributed for those specific uses. ER 4. Such uses are "circumstances" under which that chemical is "known" or "reasonably foreseen to be … used." 15 U.S.C. § 2602(4). For instance, notwithstanding that asbestos insulation is no longer produced in the United States, asbestos still insulates homes and buildings, is thus still *used* as insulation, and can become airborne if disturbed through remodeling or renovation. MA 111, 114-15; *see* 54 Fed. Reg. 29,460, 29,472-73 (July 12, 1989).

Second, so-called "associated disposal" refers to future disposals of a chemical relating to uses for which the chemical "is no longer manufactured,

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processed, or distributed." ER 4. This includes, for example, sending asbestos-containing debris from demolition of a building to a landfill. *See id.* Such disposals are "circumstances" under which a chemical is "known" or "reasonably foreseen to be … disposed of." 15 U.S.C. § 2602(4).

Third, so-called "legacy disposals" are "circumstances" under which a chemical is "known … to be … disposed of." *Id.* Contrary to EPA's assertion, these disposals are *ongoing*, not historical, activities. ER 4. "Disposal" of a chemical substance (including products containing that substance) is not a one-time occurrence when the substance or product is buried or placed in a landfill or other waste facility, but remains ongoing after the initial act of discard.

Although TSCA does not define "disposal," EPA previously defined the term in regulations implementing TSCA's requirement that EPA regulate disposal of a class of chemicals called polychlorinated biphenyls (PCBs). 15 U.S.C. § 2605(e); 40 C.F.R. § 761.3. EPA's regulations define disposal "very broadly to include any action that may be related to the ultimate disposition" of PCBs, including "accidental or intentional release of PCB[s] … to the environment." 43 Fed. Reg. 7150, 7150 (Feb. 17, 1978). EPA's "disposal" definition also includes "spills, leaks, and other uncontrolled discharges of PCBs as well as actions related to containing, transporting, destroying, degrading, decontaminating, or confining PCBs." 40 C.F.R. § 761.3. The ongoing activities of keeping the

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chemical "contain[ed] … or confin[ed]" are much broader than a one-time event. *Id.*

That disposal is not a one-time occurrence is also reflected in EPA's inclusion of "leaks, and other uncontrolled discharges" in its definition of disposal under TSCA. *Id.* Under EPA's regulations, disposal remains ongoing because PCB-contaminated soil can present ongoing and future risks if the substance leaks out of the containment or waste facility. *See In re Newell Recycling Co.*, 8 E.A.D. 598, TSCA Docket No. VI-659C (E.A.B. 1999), *aff'd*, *Newell Recycling Co. v. U.S. EPA*, 231 F.3d 204, 207-08 (5th Cir. 2000) (affirming EPA's rejection of claim that "PCB disposal is a one-time event"). For example, in *Environmental Defense Fund, Inc. v. EPA*, EPA acknowledged that PCB-containing "industrial waste and discarded end use products … in landfill sites … constitute[] a potential source of new free PCBs" that can be "a direct source of contamination for wildlife and humans." 636 F.2d 1267, 1270 (D.C. Cir. 1980) (quoting EPA Support Document).

In short, disposal of a chemical continues after it has been placed in a waste facility, and is a condition of use. 15 U.S.C. § 2602(4). The Court must set aside EPA's conclusion to the contrary.

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B. EPA's rewriting of the "conditions of use" definition is contrary to TSCA's structure and purpose

EPA's rewritten definition of "conditions of use" is inconsistent with the "overall statutory scheme" and purposes of TSCA. *See Brown & Williamson*, 529 U.S. at 133 (internal quotation marks omitted).

1. EPA's definition is at odds with TSCA's statutory scheme

First, EPA's interpretation ignores that when Congress amended section 6, it recognized that "inactive" chemicals could undergo prioritization and risk evaluation. As amended, section 8 of TSCA distinguishes between "active" chemicals, which had been manufactured or processed during the ten years prior to June 22, 2016, and "inactive" chemicals, which had not. 15 U.S.C. § 2607(b)(4)(A)(i)-(iii). In contrast, section 6 refers simply to "chemical substances," without reference to the date when the chemicals were last manufactured or processed. *Id.* § 2605. As the Senate Report accompanying an early version of the amended TSCA acknowledged, "there may be exposures of concern from substances that are not currently or no longer in commerce, and the section provides EPA authority to prioritize inactive substances that meet certain criteria." S. Rep. No. 114-67, at 11. The Court must presume that, by including the active/inactive distinction in section 8, but omitting the distinction in section 6, Congress acted intentionally. *See Russello v. United States*, 464 U.S. 16, 23 (1983). Thus, Congress intended EPA to prioritize, conduct risk evaluations on,

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and regulate chemicals with no recent manufacture or processing. Indeed, EPA itself rejected commenters' suggestion that EPA should not prioritize inactive chemicals. ER 32, 659. EPA's limited definition is at odds with Congress's deliberate scheme.

Second, EPA's interpretation would result in inconsistent treatment of identical activities based solely on whether manufacture or distribution is ongoing, a criterion that appears nowhere in section 6. For instance, under EPA's interpretation, a chemical's use in insulation constitutes a "condition of use" if the chemical is currently manufactured, processed, or distributed for use in insulation, but not otherwise. *See* ER 4; *compare* MA 229 (including as "condition of use" use of HBCD as insulation), *with* MA 114-115 (excluding from risk evaluation use of asbestos as insulation). This is so even if both uses present similar risks to public health. Omitting exposure scenarios from risk evaluations or prioritization decisions based on the happenstance of whether manufacturing, processing, or distribution for that specific use is ongoing is inconsistent with TSCA, as it involves considering a "nonrisk factor[]," just what TSCA prohibits. 15 U.S.C. § 2605(b)(1)(B), (b)(4)(A). These categorical omissions are capricious, in violation of TSCA.

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2. EPA's rewritten definition defeats TSCA's core purpose

EPA's three categorical omissions from the "conditions of use" definition, *see* ER 5, undermine TSCA's core aim to prevent unreasonable risks to health and the environment from toxic chemicals. *See* 15 U.S.C. §§ 2601(b), 2605(a)-(b). This statutory purpose is reflected both in the requirement that EPA regulate a chemical's use or disposal if either presents an unreasonable risk, and in EPA's broad authority to restrict "any manner or method" of a chemical's "use" or "disposal." *Id.* § 2605(a)(5)-(6). EPA's impermissible rewriting of the "conditions of use" definition will prevent it from making scientifically sound and health-protective decisions relating to priority designations and risk evaluations. Ongoing use and disposal of chemicals can pose significant risks that EPA must consider, even if the chemicals are no longer made, processed, or distributed for those uses.

EPA's ongoing risk evaluation of asbestos illustrates this point. Asbestos is no longer mined in the United States, few asbestos-containing products are still being imported, MA 111, and most asbestos-containing products are no longer being made, processed, or distributed. Yet large numbers of asbestos-containing products previously manufactured remain in use, including building materials such as insulation and flooring, and certain vehicle equipment. MA 114; *see also* MA 114-15 (identifying many discontinued asbestos-containing products with ongoing use and exposure, including floor tile, roofing felt, pipeline wrap, and more).

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Disposal of asbestos resulting from demolition, repair, or renovation of built structures or vehicle recycling is extensive, with disposal volumes totaling 25.6 million pounds in 2015. MA 116-17. Indeed, "the death rates from asbestos-caused diseases have remained constant," in part because of the "devastating health impact of asbestos in situ." ER 385. EPA's construction of "conditions of use" allows the Agency to ignore these health-threatening exposures in its risk evaluation. *See* MA 34 (Department of Health and Human Services urging EPA not to exclude "legacy uses" of asbestos, because such uses create "'new' hazardous exposure[s]" that pose significant risks to "fire fighters or building demolition [workers]").

Omitting ongoing use and disposal of chemicals no longer manufactured for those uses will also plague EPA's prioritization decisions. For example, when EPA considers whether to designate lead as high-priority, its analysis would be significantly under-inclusive if it omitted ongoing uses of lead-containing products—e.g., lead paint and lead-containing water pipes—that are no longer manufactured, but account for a substantial source of exposure to individuals. *See* 81 Fed. Reg. 60,304, 60,305 (proposed Sept. 1, 2016) (quoting CDC statement that "[l]ead-based paint and lead contaminated dust are the most hazardous sources of lead for U.S. children"); 56 Fed. Reg. 26,460, 26,470 (June 7, 1991) (contaminated drinking water contributes significantly to overall lead exposures); ER 699. EPA's

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erroneous omissions from lead's "conditions of use" would render its priority designation for lead grossly inadequate. Such omissions are at odds with the purposes of the 2016 TSCA amendments, which require consideration of populations with special vulnerabilities to chemicals, such as children.

C. EPA's contention that the "conditions of use" definition applies only prospectively is unreasonable

EPA's only justification for these categorical omissions is its specious contention that TSCA is "better interpreted to focus on the prospective flow of the chemical substance." ER 5.

First, as explained above, so-called legacy use, associated disposal, and legacy disposal are in fact ongoing and therefore prospective circumstances. *Supra* pp. 41-44.

Second, EPA's reliance on the passive infinitive phrase "to be" in the "conditions of use" definition is misguided. The definition plainly encompasses circumstances under which a chemical "is … *known* … to be … used, or disposed of." 15 U.S.C. § 2602(4) (emphasis added). The verb "to be" in this context describes a state of existence, i.e., that those circumstances of use and disposal are known to exist. For instance, lead pipes are "known to be used" in water distribution systems. This is true regardless of whether lead pipes continue to be manufactured or distributed.

Third, EPA's suggestion that it may have limited authority under TSCA to

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regulate use and disposal of discontinued products is both incorrect and irrelevant to the scope of risk evaluations conducted under section 6. ER 4. As discussed above, section 6(a) authorizes EPA to address risks from ongoing use and disposal of chemicals and products containing chemicals even in the absence of their ongoing manufacture, processing or distribution. 15 U.S.C. § 2605(a)(5)-(6).

Moreover, the possibility that EPA might identify an unreasonable risk that it lacks the tools to address, but that may be controlled by another agency, is not a valid reason to omit so-called legacy uses, associated disposal, and legacy disposal from risk evaluations and priority designations. TSCA section 9 expressly provides that, if EPA determines that a chemical presents an unreasonable risk that "may be prevented or reduced to a sufficient extent by action taken under a Federal law not administered by [EPA]," then EPA "shall" notify the other agency and ask whether the other agency will address the risk. *Id.* § 2608(a). The trigger for EPA to notify another agency under section 9(a) is a determination by EPA of unreasonable risk—a determination that can be made only *after* conducting a risk evaluation. *Id.* Congress thus anticipated that EPA's section 6(b) risk evaluations would include consideration of chemical exposures that may be most appropriately regulated by other agencies. EPA's approach would frustrate this deliberate statutory structure. *See supra* pp. 26-29.

Fourth, contrary to EPA's contention, *see* ER 5, the general presumption

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against construing a statute to be retroactive has no application to the question of statutory interpretation at issue. EPA's priority designations and risk evaluations do not "impair the rights a party possessed" in the past, "impose new duties with respect to transactions already completed," or impose any liability whatever. *See Landgraf v. USI Film Prods.*, 511 U.S. 244, 280 (1994).

In sum, considering the plain text of the "conditions of use" definition, the term's place in the statutory scheme, and TSCA's purposes, Congress unambiguously intended "conditions of use" to include ongoing and future uses and disposals of a chemical, even in the absence of ongoing manufacture, processing, and distribution for all or specific uses. EPA's categorical omission of so-called "legacy use," "associated disposal," and "legacy disposal" is unlawful and arbitrary. *See Chevron*, 467 U.S. at 842-43.

IV. The Framework Rules are inconsistent with EPA's obligation to base decisions on "reasonably available" information

TSCA requires EPA to consider all "reasonably available" information relating to a chemical when making prioritization decisions and conducting risk evaluations. 15 U.S.C. § 2625(k). The Framework Rules, however, preclude this consideration. The Prioritization Rule defines "reasonably available information" as "information that EPA possesses or can reasonably generate, obtain and synthesize for use, considering the deadlines … for prioritization and risk evaluation." 40 C.F.R. § 702.3; *id.* § 702.33 (same definition in Risk Evaluation

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Rule, but limited to risk evaluation deadlines). But the Rules include provisions that will prevent EPA from obtaining and developing the reasonably available information it needs—and is required to consider—to make legally and scientifically sound decisions under section 6. EPA also failed to consider how these provisions will inhibit its ability to develop needed information, "an important aspect of the problem." *State Farm*, 463 U.S. at 43.

A. The Risk Evaluation Rule will impermissibly chill the sharing of information by penalizing "incomplete" submissions by the public

Public participation plays a central role in EPA's efforts to obtain "reasonably available" information for risk evaluations. For example, EPA must provide notice of and allow public comment on draft risk evaluations. 15 U.S.C. § 2605(b)(4)(H); *see* 40 C.F.R. § 702.49(a). EPA also "encourage[s]" the public to provide comments and relevant information concerning manufacturers' requests for risk evaluations. 40 C.F.R. § 702.37(e)(4). Yet the Risk Evaluation Rule will deter public participation by placing commenters at peril of criminal punishment and civil penalties for submitting "incomplete" information. *Compare id.* § 702.31(d) (prohibiting "[s]ubmission to EPA of inaccurate, *incomplete*, or misleading information pursuant to a risk evaluation" (emphasis added)), *with* ER 73 (proposing penalties solely for incomplete submissions by manufacturers). This exceeds EPA's statutory authority and is unconstitutionally vague.

TSCA authorizes EPA to penalize only the "fail[ure] or refus[al] to comply

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with any requirement of [TSCA] or any rule promulgated, order issued, or consent agreement entered into" under the law. 15 U.S.C. § 2614(1). TSCA does not "require[]" members of the public to provide information to EPA. Thus, because 40 C.F.R. § 702.31(d) prohibits and threatens to penalize some voluntary information-sharing with EPA, it exceeds EPA's statutory authority and is invalid. *See City of Arlington v. FCC*, 569 U.S. 290, 297-98 (2013). It is also arbitrary and capricious for EPA to punish the public's submission of purportedly "incomplete" information, when the accumulated information EPA receives from individual commenters may well illustrate hazard or exposure patterns that would not come to light absent multiple submissions containing parts of the information. *Cf. NRDC, Inc. v. Pritzker*, 828 F.3d 1125, 1140 (9th Cir. 2016) (holding that agency acted contrary to law where it failed to consider how its choice to require "conclusive data" would result in underprotection of marine mammals by excluding potentially meaningful information).

In addition, by threatening members of the public with criminal and civil liability for providing incomplete information, section 702.31(d) runs afoul of the constitutional requirements of due process. A federal restriction violates due process protections when it is "so vague that it fails to give ordinary people fair notice of the conduct it punishes, or so standardless that it invites arbitrary enforcement." *Johnson v. United States*, 135 S. Ct. 2551, 2556 (2015). To

withstand scrutiny, section 702.31(d) requires the highest level of clarity because it touches on First Amendment activities of speech and petitioning the government, and subjects violators to criminal penalties. *Vill. of Hoffman Estates v. Flipside, Hoffman Estates, Inc.*, 455 U.S. 489, 498-99 (1982); *cf. Cal. Motor Transp. Co. v. Trucking Unlimited*, 404 U.S. 508, 510 (1972) (First Amendment protects petitioning).

Section 702.31(d) fails to meet this stringent standard. Members of the public and interested organizations, including Petitioners, would like to submit comments during EPA's TSCA risk evaluations. *Cf.* ER 442-80 (commenting on EPA's initial assessments under TSCA for three flame retardant clusters). But the Rule imposes criminal and civil liability for providing "incomplete" information, while providing no guidance regarding what would make a submission complete. That is unlawfully vague. *See State v. Mark Marks, P.A.*, 698 So. 2d 533, 534 (Fla. 1997) (statute criminalizing submission of "incomplete" demand letters is unconstitutionally vague for absence of guidance on meaning of "complete"); *cf. United States v. Crop Growers Corp.*, 954 F. Supp. 335, 345 (D.D.C. 1997) ("[W]here a statute or regulation imposes *no* duty whatever to disclose information, due process concerns require that criminal liability not be based on omission of such information." (citing *United States v. Murphy*, 809 F.2d 1427, 1431 (9th Cir. 1987))).

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The Rule's lack of clarity will not only subject individuals to arbitrary enforcement, it will "inevitably lead citizens to steer far wider of the unlawful zone … than if the boundaries of the forbidden areas were clearly marked." *See Grayned v. City of Rockford*, 408 U.S. 104, 109 (1972) (internal citations and quotation marks omitted). This chilling effect is unconstitutional. It will also undermine TSCA's intent by depriving EPA of information potentially relevant to its risk evaluations that would be "reasonably available," but for the vague threat of penalties.

Further, EPA did not consider the consequences of penalizing "incomplete" submissions, and did not even acknowledge that it had vastly expanded potential criminal liability as compared to the proposed rule. *See* ER 1-28. Imposing criminal and civil penalties without discussing these issues is arbitrary and capricious. *See Nat'l Parks Conservation Ass'n v. EPA*, 788 F.3d 1134, 1142-43 (9th Cir. 2015) (rejecting agency action where EPA did not "'cogently explain why it has exercised its discretion in a given manner'" (quoting *State Farm*, 463 U.S. at 48)).

B. The Framework Rules impermissibly use the factors in TSCA section 26(h) to screen, rather than weigh, information

The Risk Evaluation Rule also violates TSCA by limiting the information manufacturers must submit when requesting a risk evaluation to "[s]cientific information [that is] consistent with the scientific standards in 15 U.S.C. 2625(h)."

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40 C.F.R. § 702.37(b)(6). Section 26(h) requires that when EPA makes "a decision based on science," it must "consider as applicable" five factors to guide its decisions about the reliability of information. 15 U.S.C. § 2625(h). These factors include "the extent to which the information is relevant for [EPA's] use in making a decision about a chemical"; the "degree of clarity and completeness" with which the underlying data and analyses are documented; and "the extent to which the variability and uncertainty in the information … are evaluated and characterized." *Id.*

Section 702.37(b)(6) violates TSCA. It is both inconsistent with section 26(h) and contrary to section 26(k)'s mandate that EPA consider "reasonably available" information. *See* 15 U.S.C. § 2625(k).

First, section 702.37(b) impermissibly converts the section 26(h) considerations *EPA* must apply when weighing information into threshold requirements *manufacturers* must use to screen and limit the information they are permitted to submit to EPA. Nothing in the plain text of section 26(h) indicates that the factors are bright-line criteria for withholding information from EPA. To the contrary, each factor includes the phrase "degree of" or "extent to which," without identifying any threshold that would be disqualifying. This shows that Congress intended these factors to help EPA assess the weight information should be given based on its relative scientific reliability, not to create minimum

thresholds of reliability below which information must be withheld from EPA altogether. *Cf.* 15 U.S.C. § 2625(i) (directing EPA to make decisions "based on the weight of the scientific evidence"). EPA's conversion of these weight-of-the-evidence factors into a screening tool defies Congress's unambiguous intent.

Second, directing manufacturers to withhold information *the manufacturer decides* is not "consistent with" section 26(h) will prevent EPA from considering information relating to the chemical that is "reasonably available," in violation of section 26(k). For example, a manufacturer could decide that the documentation of "data, assumptions, … and analyses employed to generate the information" does not rise to the "degree of clarity and completeness," *id.* § 2625(h)(3), that makes it subject to disclosure under the Rule, 40 C.F.R. § 702.37(b)(6).[8] The withheld data, even if less than perfectly clear or complete, might have added to EPA's body of knowledge about the chemical. For this reason, section 702.37(b)(6) violates section 26(k)'s mandate that EPA consider reasonably available information. *Cf. Pritzker*, 828 F.3d at 1140 (rejecting agency's decision to rely on "screening criteria" that required "conclusive data" where such data were extremely difficult to obtain).

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[8] EPA provided no discernible standards for what it would mean for information to be "consistent with" "the degree of clarity" or any of these other weighing factors.

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The Prioritization Rule similarly incorporates an unlawful information screen. It states that during the prioritization process, EPA "expects to consider sources of information … consistent with the scientific standards in [section 26(h)]." 40 C.F.R. § 702.9(b). Just as EPA violated TSCA by directing manufacturers to withhold information that does not meet the section 26(h) "standards," EPA violated TSCA by erecting a "screen" that excludes some reasonably available information from EPA's prioritization process—rather than allowing EPA to weigh that information.

C. The Risk Evaluation Rule unlawfully and arbitrarily permits manufacturers to determine what information is relevant when requesting a risk evaluation

The Risk Evaluation Rule permits a manufacturer to withhold information critical to EPA's comprehensive evaluation of a chemical, if the manufacturer decides the information is not relevant to the specific conditions of use it is asking EPA to evaluate. Under the Rule, manufacturers must submit only "information that is relevant to whether the chemical substance, under the circumstances *identified by the manufacturer(s)*, presents an unreasonable risk." 40 C.F.R. § 702.37(b)(4) (emphasis added). This provision is contrary to TSCA and arbitrary and capricious.

To the extent the Rule allows EPA to limit risk evaluations to the conditions of use in the manufacturer's request, it rests on a faulty legal premise. As shown

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above, risk evaluations must address all of a chemical's conditions of use. *See supra* pp. 23-26. Without information on all conditions of use, EPA cannot conduct a full evaluation.

Allowing manufacturers to withhold information about chemicals also flouts the requirement that EPA base the requested risk evaluations on "reasonably available" information. 15 U.S.C. § 2625(k). Relevant information about a chemical's conditions of use in the manufacturer's possession is plainly "reasonably available." *Id.* Consistent with the proposed rule, ER 74, EPA must require manufacturers requesting risk evaluations to submit all such relevant information for all of a chemical's conditions of use.

The Rule is also arbitrary and capricious, for two reasons. First, EPA has given no justification for its choice to allow manufacturers to withhold information in their possession relevant to EPA's risk evaluations. *See Arrington v. Daniels*, 516 F.3d 1106, 1114 (9th Cir. 2008). Second, it is irrational to allow manufacturers to withhold relevant and reasonably available information from their risk evaluation requests, while requiring general public commenters to provide "complete" information or risk civil and criminal penalties. *See supra* pp. 52-55.

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D. EPA must consider during prioritization whether it has adequate information to conduct a risk evaluation

The Prioritization Rule does not require EPA to consider during the prioritization process whether it has adequate information about a chemical to conduct a risk evaluation; rather, EPA will consider only whether it has sufficient information "for purposes of prioritization" alone. 40 C.F.R. § 702.5(e); *see id.* § 702.5(b) (similar).[9] This limitation cannot be reconciled with the "reasonably available information" requirement. *See* 15 U.S.C. § 2625(k). By EPA's own definition, "reasonably available information" includes information EPA "possesses or can reasonably generate … considering [TSCA's] deadlines for prioritization *and risk evaluation*. 40 C.F.R. § 702.3 (emphasis added). Given this plain language, EPA's failure to consider what information it will need for risk evaluation during the prioritization phase violates TSCA and is arbitrary and capricious.

As a practical matter, it is important that EPA consider the information it needs for risk evaluation before beginning the prioritization process for a chemical. TSCA requires EPA to designate a chemical as low- or high-priority within twelve months of beginning the prioritization process, 15 U.S.C. § 2605(b)(1)(C). A high-

[9] In contrast, under the proposed rule EPA would have considered what information it needed for *both* prioritization and risk evaluation during the prioritization process. *See* ER 587.

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priority designation triggers further statutory deadlines for completing the risk evaluation. *See id.* § 2605(b)(3)(A), (b)(4)(G).

As EPA acknowledged in the proposed Rule, these deadlines may be too short for EPA to obtain needed information if it does not start gathering information before the risk evaluation commences. ER 583 ("EPA cannot assume that it will be able to require the generation of critical information during these time frames. … Tests necessary for risk evaluation, for example, could take months or years to develop and execute."). Analyzing certain hazards—such as developmental effects, neurotoxicity, and reproductive toxicity—typically requires longer-term testing; such information is particularly crucial to evaluate risks to vulnerable subpopulations such as infants, children, and pregnant women. *See* MA 653-56; *supra* p. 32; *cf.* ER 33 (noting that EPA may "need" to require "longer-term testing … to more completely consider the hazard characteristics and exposure pathways of a chemical").

Given the intertwined deadlines for prioritization and risk evaluation, if EPA does not consider the availability of information for risk evaluation before prioritization, EPA may be unable to obtain all "reasonably available" information that Congress required it to consider within the statutory timeframes. *See* 15 U.S.C. § 2625(k). This violates TSCA.

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V. Petitioners have standing

A. Petitioners have standing to bring this case on behalf of their members

Petitioners[10] have standing to challenge the Framework Rules on behalf of their members under the three-part test established in *Hunt v. Washington State Apple Advertising Commission*, 432 U.S. 333, 343 (1977). First, protecting their members from exposures to toxic chemicals is central to Petitioners' purposes. *E.g.*, PA 5-6, 43-45, 77-78, 206-11, 263-66, 384-86, 394-98, 424-29. Second, neither adjudication of the legal claims at issue nor the relief requested requires individual members' participation. *See Hunt*, 432 U.S. at 342-43.

Third, Petitioners' members would have standing to sue on their own behalf: EPA's unlawful approach to prioritization and risk evaluation injures the members by increasing the risk that they will suffer harm from exposure to toxic chemicals. *See NRDC, Inc. v. U.S. EPA*, 735 F.3d 873, 878-79 (9th Cir. 2013) (finding standing where organization showed a "credible threat" that members' children would be exposed to dangerous pesticide registered by EPA); *Cent. Delta Water Agency v. United States*, 306 F.3d 938, 948 (9th Cir. 2002) ("threat of injury" to

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[10] The membership-based Petitioners are: Alaska Community Action on Toxics, Alliance of Nurses for Healthy Environments, Cape Fear River Watch, Environmental Defense Fund, Environmental Health Strategy Center, Learning Disabilities Association of America, Natural Resources Defense Council, Sierra Club, Vermont Public Interest Research Group, United Steelworkers, and WE ACT for Environmental Justice.

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plaintiffs' crops from agency's planned water release schedule confers standing); *Hall v. Norton*, 266 F.3d 969, 976 (9th Cir. 2001).

1. Threat of harm from Risk Evaluation Rule

Petitioners' members experience a credible threat of health harms from ongoing exposure to chemicals that EPA is currently evaluating pursuant to the Risk Evaluation Rule, including asbestos, 1,4-dioxane, PERC, TCE, and HBCD. There is no doubt that Petitioners' members are exposed to these chemicals. *See, e.g.*, PA 200-03, 247-48, 294-96, 332-34. United Steelworkers' members, for instance, are exposed to asbestos when they repair, maintain, or replace equipment with asbestos-containing gaskets or insulation, and through the manufacture of chlorine and caustic soda in chlor-alkali plants. PA 387-88; *see* PA 518-23, 643-45. Cape Fear River Watch has members whose drinking water comes from a river with some of the highest documented levels of 1,4-dioxane contamination in the country, contamination that is not fully removed through water treatment. PA 62, 74; *see* PA 544-47. Alaska Community Action on Toxics' members are exposed to HBCD, which bio-magnifies in the arctic animals and fish that make up integral components of their diets. PA 15-18. The serious adverse health effects of each of these chemicals, even at low levels of exposure, are well established. PA 526, 616-21, 656-57, 680-83, 859-62.

These members face a credible threat, and reasonably fear, *NRDC v. U.S.*

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EPA, 735 F.3d at 878, that the flaws in EPA's Risk Evaluation Rule—e.g., exclusion of known or foreseeable exposures from risk evaluations, failure to make holistic risk determinations, deterring submission of all "reasonably available information"—will lead EPA to understate the risks posed by chemicals undergoing review. *See, e.g.*, MA 114-15 (excluding *in situ* uses of asbestos), 170 (excluding uses of 1,4-dioxane as a byproduct and impurity). If EPA understates risk, Petitioners' members will receive less protection than if the Rule complied with TSCA. *See, e.g.*, PA 18-23, 82-83, 212-15, 249, 273-76, 300-01, 329, 334, 387-91, 398-404. Although members attempt to remain vigilant to minimize their exposure, and incur costs to do so, they cannot completely avoid exposure to these chemicals. PA 39-40, 255-57, 291, 295-97, 332-33.

EPA's unlawful evaluation process thus threatens to increase the risk of members' exposure to chemicals like asbestos, HBCD, 1,4-dioxane, TCE, and PERC. These are exactly the types of risks Congress sought to reduce through TSCA, *see* 15 U.S.C. § 2601(b); *supra* pp. 6, 8, which "reinforc[es]" the conclusion that these injuries are cognizable for purposes of standing. *Baur v. Veneman*, 352 F.3d 625, 635 (2d Cir. 2003); *see also Covington v. Jefferson Cty.*, 358 F.3d 626, 638 (9th Cir. 2004).

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2. Threat of harm from Prioritization Rule

Petitioners' members are also reasonably concerned about the risks to their health from exposure to lead, a chemical not yet designated as high-priority, but included in the 2014 Workplan list of chemicals from which TSCA directs EPA to select high-priority chemicals. *See* ER 371. For example, members have credible concerns about their or their children's ongoing lead exposure through drinking water, household dust, and in occupational settings. PA 39-41, 251-53, 256-58, 325-29, 390-91, 420-22.

The cumulative, irreversible damage lead wreaks on the developing brains of children is undisputed. *See In re A Cmty. Voice*, 878 F.3d 779, 787 (9th Cir. 2017); PA 440-44. Especially at low levels of exposure, each additional exposure to lead can contribute to harming children's health. *See* PA 443. Adult lead exposure is also associated with adverse health outcomes. PA 444-45.

Because the Prioritization Rule allows EPA to omit conditions of use, including known, ongoing uses of lead, from its screening review, *see supra* pp. 42, 48-49; ER 31, EPA's designation of lead as high- or low-priority will not account for the full potential risk from lead. As a result, EPA's decision about whether lead "may present an unreasonable risk," including to vulnerable subpopulations like children and workers, will not conform to statutory requirements. *See* PA 277-82, 390-91, 433-34. If lead is not designated as high-

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priority, then EPA will not conduct an evaluation to determine whether lead presents an unreasonable risk that requires risk management under TSCA. Petitioners' members thus have reasonable concerns that if no risk evaluation is conducted for lead, they and their children will face an increased risk of ongoing harmful exposure.

Similarly, Petitioners' members are exposed to a variety of flame retardant chemicals, including polybrominated diphenyl ethers (PBDEs). PA 10, 80-83, 415-16. PBDEs are associated with cognitive and developmental harms in children. *See* PA 84-85, 268, 285-86. Several PBDEs are no longer produced or imported, but are still present in homes from so-called legacy uses. PA 83. Under the Prioritization Rule, EPA will ignore those uses and resulting exposures, and thus is more likely to designate these chemicals as low-priority despite PBDEs' well-recognized hazard and exposures.

3. These harms are traceable to the Framework Rules and redressable

Under the "relaxed" standards applicable here, these members' procedural injuries are traceable to the Framework Rules and will likely be redressed by a favorable decision by this Court. *See Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1083 (9th Cir. 2015). Petitioners seek to enforce a statutorily required process for evaluating chemical risks, "the disregard of which could impair" their members' "separate concrete interest" in minimizing their exposure

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to harmful chemicals. *See Or. Nat. Desert Ass'n v. Dombeck*, 172 F.3d 1092, 1094 (9th Cir. 1998) (quoting *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 572 (1992)); *see also Salmon River Concerned Citizens v. Robertson*, 32 F.3d 1346, 1355 (9th Cir. 1994) (finding causation and redressability where agency's deficient environmental analysis might cause environmental and health consequences to be overlooked).

A favorable decision by this Court would redress this injury, because it would compel EPA to assess chemical risks comprehensively, thereby requiring EPA to accurately determine whether a chemical presents an unreasonable risk and issue protective rules to eliminate any such risk. *See Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1517-18 (9th Cir. 1992) (finding redressability where plaintiffs alleged that agency's failure to follow statutorily required procedures caused it not to recommend protecting wilderness areas, thereby opening the areas to future development); *see also N.Y. Pub. Interest Research Grp. v. Whitman*, 321 F.3d 316, 325-26 (2d Cir. 2003) (finding redressability where plaintiffs averred that Clean Air Act violations created uncertainties about whether plaintiffs were being exposed to harmful air pollution).

B. Petitioners have organizational and informational standing to challenge the Risk Evaluation Rule

Petitioners Environmental Working Group, Union of Concerned Scientists, Safer Chemicals Healthy Families, and Asbestos Disease Awareness Organization

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have standing because the organizations have suffered "both a diversion of [their] resources and frustration of [their] mission[s]." *Fair Housing Council of San Fernando Valley v. Roommate.com, LLC*, 666 F.3d 1216, 1219 (9th Cir. 2012) (internal quotation marks omitted). These organizations' missions will be frustrated by the Risk Evaluation Rule insofar as a core part of their work is providing their constituencies with accurate information about chemicals to which they are exposed. PA 52-54, 60, 229-31, 307; *see also* PA 364-65 (explaining that mission includes ensuring member-scientists have access to data). In this work, the groups and their members rely extensively on government information about the uses and health risks of chemicals, including information TSCA requires EPA to release. PA 59-60, 225, 344-47; 15 U.S.C. § 2605(b)(4)(C) (requiring EPA to "publish" final risk evaluations). TSCA aims to develop "adequate information" about the effects of chemicals on health and the environment, 15 U.S.C. § 2601(b)(1), and to "increase access" to that information, H.R. Rep. No. 114-176, at 16.

Because the Risk Evaluation Rule unlawfully allows EPA to exclude conditions of use and ignore the combined exposure from multiple uses of a chemical, the information it publishes concerning a chemical's "hazards and exposures" will be incomplete. *See* 15 U.S.C. § 2605(b)(4)(F)(i). This will frustrate these Petitioners' missions of creating and distributing accurate,

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comprehensive educational materials about chemical risks.

Instead of relying on EPA, the groups and their members will be forced to "expend additional resources that they would not otherwise have expended" on new research and data collection to close gaps in the government's data. *See* PA 230-31, 345-47. These injuries give rise to organizational standing. *See Nat'l Council of La Raza v. Cegavske*, 800 F.3d 1032, 1040 (9th Cir. 2015); *Am. Canoe Ass'n v. City of Louisa Water & Sewer Comm'n,* 389 F.3d 536, 544-47 (6th Cir. 2004); *Fair Housing Council*, 666 F.3d at 1219.

In addition, the Risk Evaluation Rule will prevent Petitioners and their members from "obtain[ing] information which must be publicly disclosed pursuant to the statute." *See Fed. Election Comm'n v. Akins*, 524 U.S. 11, 20-21 (1998); PA 21, 59-60, 75, 223-28, 281-82, 343-47, 385, 400-01. This informational injury also gives rise to standing. *See Friends of Animals v. Jewell*, 824 F.3d 1033, 1041 (D.C. Cir. 2016).

CONCLUSION

Petitioners respectfully request that this Court grant the petitions for review and set aside these rules "in part." 15 U.S.C. § 2618(c)(2). Vacatur, along with remand, is the presumptively appropriate remedy here. *See Cal. Wilderness Coal. v. U.S. Dep't of Energy*, 631 F.3d 1072, 1095 (9th Cir. 2011). Petitioners request that the Court vacate and remand the following provisions of the Framework

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Rules: 40 C.F.R. §§ 702.5(b), (e), 702.7(a), 702.9(b)-(c), (f), 702.31(d), 702.37, 702.41(a)(5), (a)(7)-(9), (b)(2), (c)(1), (c)(4)(i), (c)(4)(iii), (d)(2), 702.43(a)(1), 702.47, 702.49(b)(1), (c), (d), and the following portions of the preambles: Prioritization, IV.B (ER 31), IV.J (ER 34-34), and Risk Evaluation, III.B (ER 3-6), III.G (ER 10-13), III.H.1.d-e (ER 14-15), III.H.2 (ER 15-16), III.I.1 (ER 16), and III.I.6 (ER 19). Petitioners also respectfully request that the Court issue declaratory relief that TSCA requires priority designations and risk evaluations to consider all circumstances within the statutory definition of conditions of use.

April 16, 2018

Respectfully submitted,

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STATEMENT OF RELATED CASES

Petitioners are unaware of any related cases within the definition of Circuit Rule 28-2.6.

Dated: April 16, 2018

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because it contains 15,332 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii). This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Office Word 2016 and 14-point Times New Roman font.

Dated: April 16, 2018

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on April 16, 2018.

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

Dated: April 16, 2018

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Exhibit 2

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

SAFER CHEMICALS, HEALTHY FAMILIES et al., *Petitioners,* v. U.S. ENVIRONMENTAL PROTECTION AGENCY et al., *Respondents.* IPC INTERNATIONAL, INC. et al., *Respondents-Intervenors.*	Docket No. 17-72260 Consolidated with Docket Nos. 17-72501, 17-72968, 17-73290, 17-73383, 17-73390

DECLARATION OF PATRICIA D. KOMAN, PH.D., M.P.P.
IN SUPPORT OF PETITIONERS' OPENING BRIEF

I, PATRICIA D. KOMAN, do hereby affirm and state:

Introduction and Qualifications

1. I am a Research Investigator and Scientist at the University of Michigan School of Public Health, Environmental Health Sciences Department. In that role, I am responsible for conducting scientific research regarding how environmental contaminants affect human health. I am also the President and Senior Health Scientist at Green Barn Research Associates, Ann Arbor, Michigan. As a public health professional, I apply my scientific methods to study the effects of environmental and social factors on health.

2. I earned a Ph.D. (2016) in Environmental Health Sciences from the University of Michigan, School of Public Health, in Ann Arbor, Michigan. I earned a masters degree in public policy (1994) from the University of California at Berkeley. I earned a bachelors of arts with distinction, *Phi Beta Kappa* (1988), from the University of Virginia, Charlottesville, Virginia.

3. I have worked at the University of Michigan as a scientist since 2012. My work at the university is focused on the link between chemicals in our environment—including air pollutants, water contaminants, and consumer and industrial products—and human health, with a particular emphasis on vulnerable populations.

4. Previously, for 22 years, I served as a senior environmental scientist and program manager at the U.S. Environmental Protection Agency (EPA). There I conducted risk assessments and evaluated scientific literature about how the environment affects health from a variety of sources. I was awarded the Administrator's Award for Excellence for my health impact assessments and methodological advances. I have authored government reports with peer-reviewed methodologies. I earned four Gold Medals for exceptional service.

5. I have published articles in peer-reviewed scientific journals, including articles on the identification of vulnerable populations for protection from harm through health-based standards. I have authored numerous government

reports, such as Reports to Congress, *Federal Register* notices, staff summaries of scientific data (staff paper) and regulatory impact assessments.

6. I have presented testimony and comments to state and federal agencies on the regulation of toxic chemicals. I have organized and participated as an expert in educational programs with experts on chemical policy (including 1,4-dioxane) at the University of Michigan and the American Public Health Association annual meeting.

7. I have been invited by the State of Michigan Department of Environmental Quality to provide scientific input on hazardous chemical clean-up criteria and lead in drinking water issues related to the Flint water crisis. I managed an environmental educational program regarding water quality, with over 1,000 contacts with Flint residents and middle school students.

8. A more complete description of my educational and work experience, as well as a complete list of my publications, is attached to this declaration as Exhibit A.

9. By virtue of my training, experience, and knowledge of the pertinent scientific literature, I am considered by my peers as an expert in the public health impacts and sources of exposure to 1,4-dioxane.

10. All of the information set forth in this declaration is based upon my education, personal knowledge, experience, and my personal review of the

pertinent literature, including the documents listed as references at the end of this declaration.

Sources and Uses of 1,4-Dioxane (CASRN: 123-91-1)

11. 1,4-Dioxane is a chemical that contains four carbon atoms and two oxygen atoms in a ring.

12. 1,4-Dioxane is an industrial solvent manufactured in large quantities (up to 10 million lbs/year) for numerous industrial, commercial, and consumer uses. (Agency for Toxic Substances and Disease Registry 2012; Integrated Risk Information System 2013). In industrial use, 1,4-dioxane is a byproduct (a chemical formed as an incidental result) in manufacturing processes involving ethylene oxide, such as the production of the common plastic polyethylene terephthalate (PET), polyester, and ethyoxylated surfactants. The hazards posed by 1,4-dioxane are identical whether it is produced intentionally or as a byproduct.

13. 1,4-Dioxane is used as both a laboratory reagent and as an ingredient in the manufacture of a second industrial chemical (e.g., as an intermediate, an extraction medium for fats and oils, and as part of a polymerization catalyst that speeds up a chemical reaction). 1,4-Dioxane is also used in a wide variety of commercial and consumer products, including personal care products, detergents, waxes, and antifreeze. Other uses of 1,4-dioxane documented in Europe include commercial and consumer products such as lacquers, varnishes, paint strippers,

dyes, greases, cleaners and detergents, adhesives, cosmetics and deodorants (ECJRC 2002).

14. 1,4-Dioxane is also present as a contaminant in cosmetics, detergents, shampoos, pharmaceuticals, foods, agricultural and veterinary products and ethylene glycol-based antifreeze coolants, because it is a byproduct of manufacturing involving ethylene oxide (Agency for Toxic Substances and Disease Registry 2012). Although in the U.S. many manufacturers remove 1,4-dioxane through vacuum stripping in consumer cosmetics and household products, the U.S. Food and Drug Administration has stated 1,4-dioxane is still present in significant amounts in some products (ATSDR, 2012). In addition, tests conducted by the Campaign for Safe Cosmetics document concentrations of 1,4-dioxane in children's and adult bath products (Campaign for Safe Cosmetics, 2007). Products found to contain 1,4-dioxane include shampoo, conditioner, liquid hand soap, body wash, skin moisturizer, and baby lotion (Environment Canada, 2010).

15. The use and disposal of 1,4-dioxane in the past has led to environmental contamination that is contributing to ongoing exposures. Because 1,4-dioxane had been widely used as a stabilizer in certain chlorinated solvents, 1,4-dioxane is frequently found within groundwater contaminated with chlorinated solvents (Adamson et al. 2014; Knappe, D. Lopez-Velandia, C. Hopkins, Z. Sun 2016).

16. As of 2016, 1,4-dioxane had been identified at more than 34 sites on the EPA National Priorities List, the list of hazardous waste sites eligible for remediation under the federal Superfund program; it may be present (but samples were not analyzed for it) at many other sites (EPA 2016b).

17. These uses described in Paragraphs 12 through 16 above have led to widespread 1,4-dioxane exposure in the United States.

Environmental Fate and Transport

18. 1,4-Dioxane dissolves quickly and easily in water and is persistent. 1,4-Dioxane leaches readily from soil to groundwater, is miscible in water (meaning it dissolves completely), migrates rapidly in groundwater. In groundwater, 1,4-dioxane forms the leading edge of a pollution plume and travels much faster, farther, and more widely than other volatile organic compounds. Thus, 1,4-dioxane can rapidly reach drinking water or enter house basements through soil or groundwater intrusion, for example, contributing to exposures often before other pollutants are detected.

19. 1,4-Dioxane has been used at many industrial and federal facilities like military bases because of its widespread utility with other solvents.

20. Improper disposal or storage has caused 1,4-dioxane spills at military, defense contracting, and other industrial facilities (Integrated Risk Information

System 2013). Based on this history, unintentional releases and spills are reasonably foreseeable wherever the chemical is widely used.

Human Exposure to 1,4-Dioxane

21. As described below, human exposure to 1,4-dioxane is widespread as a result of its wide variety of uses. People come into contact with this substance through: drinking water, personal care products, household products, cosmetics, and occupational exposures, among other sources.

22. In the United States, humans are exposed to 1,4-dioxane primarily through ingestion of contaminated water and food and dermal contact with consumer products (Agency for Toxic Substances and Disease Registry 2012; ECJRC 2002; DHHS 2017).

23. Worker exposures include inhalation of vapors, skin absorption, ingestion, and skin and/or eye contact (Agency for Toxic Substances and Disease Registry 2012; ECJRC 2002; DHHS 2017; NIOSH 2010). The National Occupational Exposure Survey (conducted from 1981 to 1983) estimated that 430,000 workers, including 149,697 women, potentially were exposed to 1,4-dioxane (Boiano and Hull 2001; NIOSH 1990). Exposures occur during the production and use of 1,4-dioxane as a stabilizer or solvent (Agency for Toxic Substances and Disease Registry 2012; ECJRC 2002; DHHS 2017).

24. Exposures of 1,4-dioxane via drinking water are widespread and are documented back to the 1980s (Dietrich, A.M., D.S. Millington 1983; Stanton 2016; MDEQ 2018).

25. According to EPA's Toxic Release Inventory for 2014, 96,437 pounds of 1,4-dioxane were released to the air, 24,262 to surface water, and 422,943 pounds were transferred from the facility for off-site disposal (US EPA TRI Explorer, Release Chemical Report database, available at https://iaspub.epa.gov/triexplorer/tri_release.chemical). Total annual environmental releases of 1,4-dioxane reported by EPA's Toxics Release Inventory from 1988 to 2009 ranged from 0.3 million to 1.3 million pounds (DHHS 2017).

26. Based on drinking water sampling conducted under the direction of EPA, a significant portion of the municipal drinking water systems in the United States have 1,4-dioxane at levels associated with increased risk of serious health problems. Specifically, 2017 results from EPA's Third Unregulated Contaminant Monitoring Rule (UCMR3 at https://www.epa.gov/sites/production/files/2017-02/documents/ucmr3-data-summary-january-2017.pdf) indicate that over 6.9% of 4,905 public drinking water systems serving >10,000 people had concentrations of 1,4-dioxane above the EPA Reference Concentration of 35 micrograms/L, which signifies these populations could be likely to experience appreciable risk of deleterious effects (US

Environmental Protection Agency 2009; Integrated Risk Information System 2013).

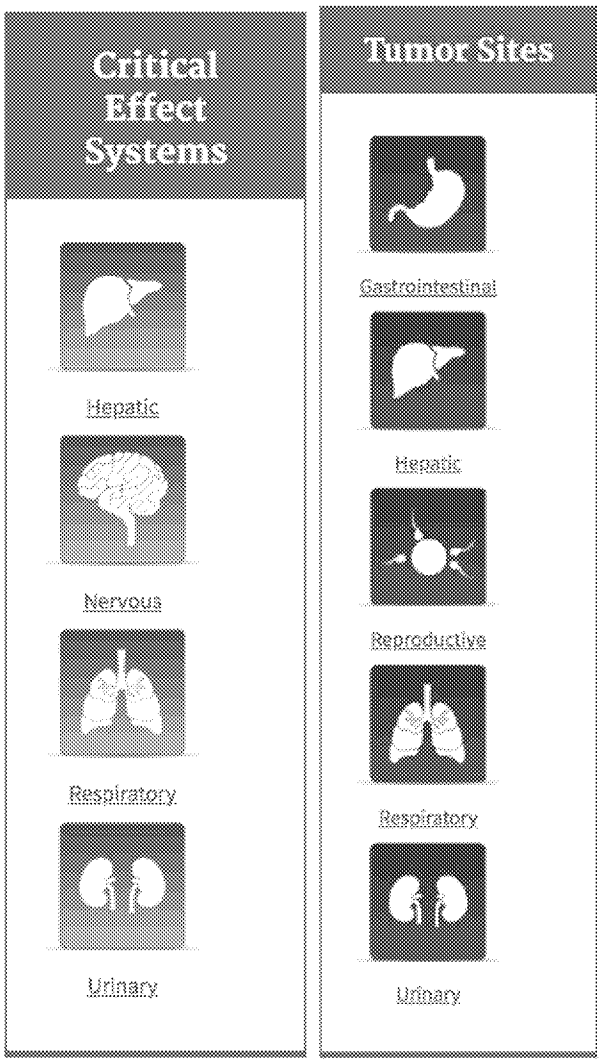
27. The EPA testing omits small public drinking water systems (i.e., systems serving <10,000 people), which account for about 27% of the U.S. Population (US Environmental Protection Agency 2017). Private wells are also not included in EPA's testing. Therefore, the UCMR3 results underestimate potential exposures (Sun, Lopez-Velandia, and Knappe 2016).

28. 1,4-Dioxane is present in a wide variety of consumer products, including household detergents, cosmetics/ toiletries, and foods (Integrated Risk Information System 2013). Based on an analysis of the ingredients in 15,000 cosmetic and other personal-care products, 22% of all such products may contain 1,4-dioxane (EWG 2017). Dermal contact is a relevant route of exposure. Cosmetics and personal care products have the potential to contribute significantly to exposures, since people are applying them directly to their bodies, often multiple times per day, every day (DHHS 2017).

Human Health Effects of 1,4-Dioxane

29. As described below, 1,4-dioxane is readily absorbable; distributes rapidly through the body, is likely to cause cancer in humans by all routes of exposure; and is associated with adverse reproductive effects. Long-term exposure to 1,4-dioxane may cause kidney and liver damage. Short-term exposure to high

levels of 1,4-dioxane may result in nausea, drowsiness, headache, and irritation of the eyes, nose and throat. The graphic below taken from the IRIS program summarizes for 1,4-dioxane exposure the four critical effect systems and the five tumor sites.



Summary of Critical Effect System and Tumor Sites for 1,4-Dioxane Exposure

Source: US EPA IRIS Program 2013

30. 1,4-Dioxane is readily absorbed through the lungs and gastrointestinal tract (Integrated Risk Information System 2013).

31. Distribution is rapid and uniform in the lung, liver, kidney, spleen, colon and skeletal muscle tissue (Agency for Toxic Substances and Disease Registry 2012).

32. 1,4-Dioxane is a likely human carcinogen. EPA has classified 1,4-dioxane as "likely to be carcinogenic to humans" by all routes of exposure (Integrated Risk Information System 2013). The U.S. Department of Health and Human Services (DHHS) states that 1,4-dioxane is reasonably anticipated to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in experimental animals (DHHS 2014). The National Institute for Occupational Safety and Health (NIOSH) considers 1,4-dioxane a potential occupational carcinogen (NIOSH 2010).

33. Short-term exposure to high levels of 1,4-dioxane may result in nausea, drowsiness, headache, and irritation of the eyes, nose and throat (Agency for Toxic Substances and Disease Registry 2012; Integrated Risk Information System 2013; NIOSH 2010; ECJRC 2002). An important feature of the scientific studies is a finding of consistent positive results in more than one type of animal model, which increases confidence in the results. Four inhalation studies in animals were identified in the literature; two, 13-week subchronic studies in laboratory animals (Kasai et al. 2009; Fairley, A; Linton, EC; Ford-Moore 1934) and two, 2-year chronic studies in rats (Kasai et al. 2009; Torkelson et al. 1974). Nasal, liver,

and kidney toxicity were the primary noncancer health effects of inhalation exposure to 1,4-dioxane in rodents.

34. 1,4-Dioxane is weakly genotoxic and its reproductive effects in humans are unknown; however, a developmental study on rats indicated that 1,4-dioxane may be slightly toxic to the developing fetus (Agency for Toxic Substances and Disease Registry 2012; Giavini, Vismara, and Broccia 1985). Studies in animal models have also reported that relatively high doses of 1,4-dioxane (1,000 mg/kg-day) during gestation can produce reduced fetal birth weights, which is an important marker for future health (Giavini, Vismara, and Broccia 1985).

35. Chronic studies reported the most sensitive effects in the liver and kidney in male Sherman rats from a high quality 2-year drinking water study (Kociba et al. 1974).

36. Long-term exposure to 1,4-dioxane may cause kidney and liver damage. (Agency for Toxic Substances and Disease Registry 2012; Integrated Risk Information System 2013; ECJRC 2002).

37. Due to concerns about the demonstrated serious health effects of 1,4-dioxane, 18 state health-based drinking water guidance values and federal occupational exposure limits have been established. EPA's IRIS database includes a chronic oral reference dose (RfD) of 0.03 milligrams per kilogram per day

(mg/kg/day) based on liver and kidney toxicity in animals, and a chronic inhalation reference concentration (RfC) of 0.03 milligrams per cubic meter (mg/m^3). (Integrated Risk Information System 2013). A chronic oral reference dose is a risk assessment benchmark or estimate of a daily oral dose to the human population (including accounting for sensitive subgroups and uncertainty) that is likely to be without an appreciable risk of deleterious non-cancer effects during a long-term period. A reference concentration is a similar risk assessment benchmark, referring to inhalation exposures.

38. Thus, people are exposed to 1,4-dioxane through multiple pathways including contaminated water, food, personal care products, and occupational exposures. The evaluation of the risks posed by these exposures must take into account the totality of those aggregate exposures in order to follow appropriate scientific procedures (National Academies of Sciences 2017; National Research Council 2009). Assessment of cumulative environmental exposures (e.g., to other chemicals) would also be recommended.

Conclusion

39. In my scientific opinion, 1,4-dioxane exposure may result in serious and in some cases permanent adverse health consequences for humans. These health effects are a cause for concern for current levels of 1,4-dioxane exposures. People are currently exposed via oral ingestion, inhalation and (to a lesser amount)

dermal contact pathways. Importantly, the risks posed by 1,4-dioxane are identical whether it is present by design or as a byproduct or contaminant. To fully assess the risks from 1,4-dioxane, a full consideration of the aggregate exposures must be undertaken.

Dated: April 13, 2018

Patricia Koman, Ph.D., MPP

References

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Exhibit A

to the Declaration of Patricia D. Koman, Ph.D., M.P.P.,
in Support of Petitioners' Opening Brief

Patricia D. Koman

524 3rd Street
Ann Arbor, MI 48103

tkoman@umich.edu
734-474-4711

Education

Doctor of Philosophy August 2016	University of Michigan, School of Public Health, Ann Arbor Environmental Health Sciences
Master of Public Policy May 1994	Graduate School of Public Policy, University of California, Berkeley
B.A. with Distinction May 1988	University of Virginia, Chemistry and Philosophy, *Phi Beta Kappa*; Louis Hammond Prize; Raven Society; Echols Scholar; Alpha Epsilon Delta science honorary society

Professional Experience

University of Michigan, School of Public Health, Ann Arbor, MI

(September 1, 2012 – present)

Research Investigator, Environmental Health Sciences (October 1, 2016 – present)
Interim Managing Director, Risk Science Center (September 1, 2016 – August 30, 2017)
Senior Project Manager, Dean's Office and Environmental Health Sciences Department (September 1, 2012 – August 31, 2016)

- Trained, mentored and developed scientists, faculty, and community members nationwide to communicate scientific data including evaluating epidemiologic studies with a variety of designs in regulatory decisions; team recommendations to Agency executives have been accepted, resulting in new research priorities, discussion in *Federal Register* records of decisions of additional data, and new and deeper involvement of medical sector stakeholders in environmental issues
- Initiated and led first School of Public Health (SPH) multi-disciplinary community-engaged project with Michigan Engaging Community Through the Classroom (MECC); co-investigator on three grants including 5-year $938,000 UM Third Century Transformative Learning grant for interdisciplinary engaged learning
- Conducted longitudinal secondary analysis of cohort data to examine the association between air pollution exposures with pulmonary function; performed an exposure assessment to assign air quality measurements to individual participants based on residential history and exam date; examined effect modification by obesity status of the relationship between air pollution exposure and lung function
- Principal investigator for MI-Environment cumulative environmental exposure vulnerability mapping and wildfire and health grants
- Developed environmental education curriculum and evaluation; as part of community-participatory process assisted with training of over 900 Flint residents about water quality and the drinking water system
- Led statewide training needs assessment of environmental health professionals to prepare public health workforce and target Michigan Public Health Training Center national course offerings, resulting in improved customer service competencies and skill in communicating complex issues to decision makers
- Provided expert consultation and testimony

- Michigan Department of Environmental Quality (MDEQ) Expert Panel to review water quality data from the city of Flint and recommendations with Michigan Governor Snyder's Flint Water Interagency Coordinating Council (FWICC) (2016- present)
- SPH Dean's Practice Advisory Committee (2012-2016)
- MDEQ technical advisory group for hazardous chemical clean-up standards (2013-14)

U.S. Environmental Protection Agency (June 1991 – August 30, 2012)

Environmental Scientist, Program Manager and Supervisor

- Office of Transportation and Air Quality, Ann Arbor, MI (2001 – August 30, 2012)
- Office of Air Quality Planning and Standards, Durham, NC (1994 – 2001)
- Region 9 Office, San Francisco, CA (June 1991 – 1994)

- Program Manager for Clean Ports USA: Achieved significant public health benefits by leading teams to reduce diesel emissions at U.S. seaports; in 5 years grew initiative to $100 million EPA grant program with projects on every coast and significant private investment
  - Developed Agency-wide multi-media marine ports strategy and budget request with EPA Administrator and Regional Administrators; communicated complex risk and exposure information to executives
  - Improved performance of 15-person cross-Agency multi-disciplinary team by creating new vision, managed operations and marketing campaign including web and print; supported 20 press announcements by top EPA executives and U.S. Senators; improved procedures for $125,000 public and technical information line to better communicate meaningful data to public
  - Forged key relationships with maritime industry, state and local agencies and other federal partners; developed regional networks by hosting technology conferences across the country; supported Agency executives' development of strategic plan in U.S., Taiwan, Panama and China
  - Initiated $2 million 6-party international partnership to develop prototype hydraulic hybrid yard hostler featuring EPA-patented technologies; displayed vehicle at international meetings by EPA Administrator; prototype tested in commercial service achieving emissions and fuel savings
  - Brought group to consensus over significant barriers as co-chair of Federal advisory workgroup under Mobile Source Technical Review Subcommittee
- Team leader of Implementation Strategies team responsible for budget formulation, communications and project implementation of the National Clean Diesel Campaign, developed web site with 80,000 hits and 40,000 copies of brochures describing health impacts of programs in the hands of clients each year; Charter developer of Clean School Bus USA nationwide public-private $150 million partnership measurably improving children's health

- Principal author of first Diesel Emissions Reduction Program Report to Congress; interpreting new legislative mandates; managed operations and improved software and web platform development of database to track, evaluate, and publicize projects; developed team with junior staff through coaching

- Program manager for multi-disciplinary scientific team conducting benefit-cost assessments of health and environmental improvements from major federal mobile source policies; authored air quality and public health justification for major rulemakings that withstood court challenges; worked with scientific advisory boards
  - Convened and led multi-disciplinary teams with annual budgets in excess of $500,000 to deliver complex modeling tasks on-time and under budget for Clean Air Act regulation of diesel emissions from heavy duty vehicles, nonroad equipment, and marine vessels while improving assessment methods and guiding research

- Principal author and team leader of landmark national air pollution standards for fine particulate matter under court ordered schedule; led 20-person multi-disciplinary scientific team and managed $1 million budget; analysis served as basis for policy that survived challenge to U.S. Supreme Court and became a top national priority for the EPA over the ensuing decade; required extensive evaluation of epidemiologic and air quality data

- As Air Toxics Center Director, supervised 11 engineers and specialists; managed all aspects of major Clean Air Act rulemaking; formulated and managed center's annual budget and resource request for 5-year plan

- As Coatings and Consumer Products Group Manager, supervised 12 engineers and Ph.D. scientists; responsible for personnel actions, health & safety and security policies for employees; managed all aspects of regulatory development and technical support for 28 new Clean Air Act actions; managed $2.3 million budget; advised senior management and prepared EPA witnesses for Congressional hearings; represented office to key stakeholders; briefed Congressional staff and the Office of Management and Budget staff; managed response to comment on six volume Report to Congress; interpreted legislation for first national rulemaking

SRI International, Research Analyst, Menlo Park, CA (1990 – 1991)
Conducted competitive assessments to create corporate strategies regarding environmental issues

ICF Incorporated, Analyst, Washington, DC (1988 – 1990)
Analyzed economic and technical impacts of broad array of environmental programs

Professional Honors and Awards

2017 National Center for Atmospheric Research Weather, Climate and Health Workshop Travel Scholarship
2017 University of Michigan "Road Scholar" Participant
2016 American Public Health Association Leadership Challenge Winner
2016 University of Michigan Graham Institute Dow Distinguished Interdisciplinary Sustainability Award
See for Yourself: What's in Your Water? Model Building
2015 University of Michigan Provost Teaching Innovation Prize
Michigan Engaging Community Through the Classroom (MECC)
2015 University of Michigan Graham Institute Dow Distinguished Interdisciplinary Sustainability Award
MI-Environment: Heat Stress Vulnerability Mapping
2014 University of Michigan, School of Public Health, Risk Science Fellowship
2014 University of Michigan Graham Institute Dow Distinguished Interdisciplinary Sustainability Award
MECC, Willow Run
2013 U.S. Health Resources and Services Administration and Association of Schools and Programs of Public Health "Promising Practice" recognition for MECC collaborative project teaching innovation
2012 Toastmasters International, Advanced Leadership – Silver
2011 Toastmasters International, Advanced Communication - Silver
2006 U.S. Environmental Protection Agency (EPA) Administrator's Award for Excellence
Economic Benefit Assessment Method Development
2007 U.S. EPA Gold Medal for Exceptional Service, Clean Diesel Initiative Team
2005 U.S. EPA Gold Medal for Exceptional Service, Clean Air Nonroad Diesel Rule Team
2004 U.S. EPA Silver Medal for Superior Service. Economic Benefits Methods Development
2003 U.S. EPA Bronze Medal for Commendable Service
2002 U.S. EPA Gold Medal for Exceptional Service, Heavy Duty Diesel Engine and Fuel Rule Team
2002 U.S. EPA Bronze Medal for Commendable Service
2001 U.S. EPA Role Model Award
1999 U.S. EPA Bronze Medal for Commendable Service
1998 U.S. EPA Gold Medal for Exceptional Service, Particulate Matter National Ambient Air Quality Standards
1997 U.S. EPA Bronze Medal for Commendable Service, Particulate Matter National Ambient Air Quality Standards Staff Paper

Grants

ACTIVE

1. University of Michigan Graham Institute Catalyst Grant. Atmospheric Modeling in Human Health & Climate Change Risk Assessment: Wildfire Smoke Exposures, $10,000 Principal Investigator (2017)

2. U.S. Environmental Protection Agency Environmental Education Grant, See for Yourself: What's in Your Water? Flint, Michigan $122,333, program manager and grant writer (2016-2017, PI Dvonch)

3. NIH/NIEHS Michigan Life Stages Environmental Exposures & Disease, NIEHS Center grant P30ES017885, University of Michigan, Co-Investigator, Integrated Health Sciences Core (2016, 5-year grant, PI Loch-Caruso)

4. University of Michigan, Third Century Transformative Learning Grant, Michigan Engaging Community Through the Classroom, $938,000 Co-Investigator (2015, 5-year grant, PI Norton)

COMPLETED

1. NIH/NIEHS Michigan Life Stages Environmental Exposures & Disease, NIEHS Center grant P30ES017885, University of Michigan, Pilot Grant: Climate and cardiopulmonary health: Does excess weight enhance risk? $5,600, Principal Investigator (2017)

2. NIH/NIEHS P30 ES017885 Community Outreach and Engagement Core (COEC) Supplement, 16-PAF08052, Environmental Justice Academy $100,000, Co-Investigator (2016, PI Schulz)

3. NIH/NIEHS Pilot grant, Michigan Life Stages Environmental Exposures & Disease P30ES017885, MI-Environment: Promoting Climate-Related Health within Michigan's Vulnerable Communities, $9,342 Co-Investigator (2016, PI Sampson)

4. University of Michigan, Graham Institute, Distinguished Interdisciplinary Sustainability Award, See for Yourself: What's in Your Water model development pilot, $5,000 Co-Investigator (2016, PI Olson)

5. University of Michigan President Fund, See for Yourself: What's In Your Water? Model Building, $3,600 Co-Investigator (2016, PI Daigger)

6. University of Michigan, Arts of Citizenship Award, MI-Environment: Hazard Proximity in Kent County, Michigan, $8,500 Principal Investigator (2015)

7. University of Michigan, Rackham Graduate Doctoral Candidate Award, $3,000 Principal Investigator (2015)

8. University of Michigan, Graham Institute, Distinguished Interdisciplinary Sustainability Award, MI-Environment: Climate Change and Heat Stress Vulnerability, $5,000 Co-Investigator (2015 PI O'Neill)

9. University of Michigan, Graham Institute, Distinguished Interdisciplinary Sustainability Award, Michigan Engaging Community Through the Classroom: Willow Run, $8,000 Co-Investigator (2014, PI Kellbaugh)

10. Michigan Public Health Training Center, Pilot Collaborative Project, Michigan Engaging Community Through the Classroom, $8,500 Principal Investigator (2013)

11. Rackham Graduate Student Award, University of Michigan, $1,500 Principal Investigator (2013)

Peer-Reviewed Publications

Koman PD, Mancuso P. 2017. Ozone exposure, cardiopulmonary health, and obesity: a substantive review. Chem. Res. Toxicol. acs.chemrestox.7b00077; doi:10.1021/acs.chemrestox.7b00077. ISSN 0893-228X. PMID 28574698 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5556919

Koman, P.D. K. Hogan, R. Mandell, N. Sampson, C.M. Coombe, Y. Hill-Ashford, M.M. Tetteh, D. Wilkins, R. Loch-Caruso, A. J. Schulz, T Woodruff. Air Pollution Exposure and Susceptibility of Pregnant Women: Disparities in Public Health Protection under the Clean Air Act (*Revision under review*)

Koman, P.D., J. Lam, T.J. Woodruff. The Promise and Perils of the Lautenberg Chemical Safety Act. (*Invited commentary manuscript, preparing resubmission)*

Norton, R.K., N.P. David, S. Buckman, **P.D. Koman**, Land Use Planning for Climate Change Adaptation on the Laurentian Great Lakes (*Revision under review*)

R.K. Norton, R. K., P. Fontaine, E.R. Gerber, G. Hohner, **P.D. Koman.** Pulling Aside Professional Blinders to Better Tackle Wicked Problems Through Multidisciplinary Community-Service Learning (*Revision under review*)

Manuscripts in Preparation

Koman, P.D., S.K. Park, C. Gronlund, D.J. Jacobs, Jr., P. Gordon-Larsen, P. Mancuso, M. O'Neill, Long-term Particulate Matter and Ozone Exposure and Pulmonary Function: Does Excess Weight Increase Risk? (Approved via CARDIA publication committee for submission, *manuscript in preparation*)

Koman, P.D., F. Romo, C. Gray, N. Sampson, S. Landfried, M. Battaglia, R Goodspeed, M.S. O'Neill, A.J. Schulz. MI-Environment: Heat Stress Vulnerability in Michigan Communities (*Manuscript in preparation)*

French, NH, M Billmire, JT Dvonch, S Hoshiko, J Hutchninson, **P.D. Koman**, MS O'Neill, CE Reid, A Steiner, BJ Thelen, S Wu. Modeling Wildland Fire Smoke Exposure for Quantifying Human Health Associations (*First draft prepared)* (after first author, authors listed alphabetically)

Peer Reviewed Reports

1. "Report to Congress: Highlights of the Diesel Emissions Reduction Program, Energy Policy Act of 2005," US EPA Office of Air and Radiation report, EPA-420-R-09-006, August 2009 (Principal author)

2. "Study and Report to Congress on Section 183(e), Response to Comments" U.S. EPA, Office of Air and Radiation report, EPA-453/R-98-007, August 1998 (Managing director)

   The Section 183(e) Study is composed of six volumes:
   (1) Report to Congress (EPA–453/R–94–066–a)
   (2) Comprehensive Emissions Inventory (EPA–453/R–94–066–b)
   (3) Fate of Consumer Product VOC in Landfills (EPA–453/R–94–066–c)
   (4) Fate of Consumer Product VOC in Wastewater (EPA–453/R–94–066–d)
   (5) Economic Incentives to Reduce VOC Emissions from Consumer and Commercial Products (EPA–453/R–94–066–e)
   (6) Aerosol Products and Packaging Systems (EPA–453/R–94–066–f)

3. "Review of the National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information," U.S. EPA Office of Air and Radiation report, EPA-452\R-96-013, July 1996 (Principal author)

Government Reports with Peer Reviewed Methodologies

1. "MOVES Operating Mode Distribution Generator," U.S. EPA Office of Transportation and Air Quality, EPA-420-B-12-037, May 2012

2. "The National Clean Diesel Campaign (NCDC) 2005 Progress Report," U.S. EPA Office of Transportation and Air Quality, EPA-420-R-06-009, June 2006

3. "Regulatory Impact Analysis: Nonroad Diesel Engines and Fuel," (Chapter 2: Air Quality, Health and Welfare, and Chapter 9: Benefit-Cost Analysis), U.S. EPA Office of Air and Radiation report, May 2004

4. "Final Regulatory Support Document: Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder"(Chapter 2: Air Quality, Health and Welfare and Chapter 3: Industry Characterization) U.S. EPA Office of Air and Radiation report, EPA420-R-03-004, January 2003

5. "Regulatory Impact Analysis: Large SI/Recreational Vehicles Control," (Chapter 2: Air Quality, and Chapter 9: Benefit-Cost Analysis), U.S. EPA Office of Air and Radiation report, September 2002

6. "Regulatory Impact Analysis: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements," (Chapter VII: Benefit-Cost Analysis), U.S. EPA Office of Air and Radiation report, EPA420-R-00-026, December 2000

7. "2018 Milestone Benefits Assessment of BART Reductions in 9 Western States," U.S. EPA Office of Air Quality Planning and Standards report, http://www.epa.gov/ttn/ecas/regdata/Benefits/milestone.pdf August 2000

Translational Publications and Technology Demonstrations

1. **Koman, P.D.**, P. Goldberg, C. Klawuhn, M. Swain, P.D. Meadows, "Environmental Health Professionals Training Needs Assessment," University of Michigan, Office of Public Health Practice report, Ann Arbor, MI, 2014

2. Anthony, M., **Koman, P.D.**, Storton M. Revisiting the Campus Power Dilemma: A Case Study. Planning for Higher Education Journal. Vol 4. No. 1, http://www.scup.org/phe. December 2013

3. "Clean Ports USA: Navigating Toward Cleaner Air," US EPA, Office of Transportation and Air Quality, EPA-420-F-10-023, 2010

4. Federal Laboratory Consortium for Technology Transfer calendar, Hydraulic hybrid yard hostler featured as EPA's technology of the year, 2010 (Project initiator, work assignment manager, team leader for $2 million 6-party international partnership)

5. Prototype hydraulic hybrid yard hostler displays featuring EPA-patented technologies:
- US EPA Administrator press event, Port of New York and New Jersey, 2008
- Society of Automotive Engineers World Congress, Detroit, April 2009
- World Maritime Day Parallel event "Climate Change: A Challenge for IMO too! Responding to a Changing Environment" October 2009

6. "National Clean Diesel Campaign: Working Together for Cleaner Air," US EPA, Office of Transportation and Air Quality, EPA-420-F-09-063, 2009

7. "National Clean Diesel Campaign: State and Local Government Tools and Resources," U.S. EPA, Office of Transportation and Air Quality, EPA-420-F-09-070, 2009

8. "National Clean Diesel Campaign: Funding your Clean Diesel Project, " U.S. EPA, Office of Transportation and Air Quality, EPA-420-F-09-071, 2009

9. "Health Benefits Due to Emission Reductions Attributed to National Clean Diesel Campaign Scenarios," with Abt Associates, September 2007

10. **Koman, P.D.**, and Blubaugh, J. "Ports and Politics: Ports Working Together to Achieve Cleaner Air," pp. 25-27, Seaports, Winter 2007
http://www.aapaports.org/Publications/SeaportsDetail.cfm?itemnumber=3518#seaportsarticle7

11. **Koman, P.D.** "Common Goals," Bunkerspot Journal, Vol. 4, No. 1, February 2007

12. **Koman, P.D.** "Clean Ports USA: Navigating to Cleaner Air," Bunkerspot Journal, April 2006

13. "Reducing Idling for Clean Air," U.S. EPA, Office of Transportation and Air Quality, EPA-420-H-06-001, April 2006

14. "25 Million Reasons Why It's Important to Reduce Idling," U.S. EPA, Office of Transportation and Air Quality, EPA-420-F-06-018, April 2006

15. "Reducing School Bus Idling: The Key to a Healthier Ride Training Video," U.S. EPA, Office of Transportation and Air Quality, EPA-420-V-04-001 and EPA-420-CD-04-001, August 2004

16. Small, M, **Koman, P.D.**, Rodrieguez, M, Savage, M.K., "State Money Talks: State Assurance Funds are Shaping Compliance and Corrective Action," Soils, pp. 24- 33. April 1993

17. Small, M., **Koman, P.D.**, Rodriguez, M, Savage, M.K. State Assurance Funds and their Impact on Underground Storage Tank Compliance and Remediation. Edward J Calabrese and Paul T Kostecki (Ed.), Hydrocarbon Contaminated Soil, Vol. 3 (pp. 653-752). Lewis Publishers, Chelsea, MI. ISBN 1-56670-018-3 1993.

Conference Leadership

1. University of Michigan, School of Public Health, Inaugural Environmental Health Practice Workshop, "Health Equity at Industrial Scale – Lautenberg Chemical Safety Act Under the Trump Administration," Ann Arbor, MI (steering committee chairperson, panel moderator, March 28, 2017)

2. University of Michigan, School of Public Health, Environmental Health Sciences, 75th Anniversary Celebration (steering committee chairperson, February 2017)

3. University of Michigan, School of Public Health, Nursing Grand Rounds, Healthy Built Environment: Nursing Strategies at the Policy, Program, and Patient Levels, Ann Arbor, MI (steering committee member) http://miphtcdev.web.itd.umich.edu/trainings/healthy-built-environments-nursing-strategies-policy-program-and-patient-levels-0 April 4, 2016

4. University of Michigan, School of Public Health, Public Health Leadership Summit, Blue Skies with Green Allies: A Role for All Sectors in Environmental Health, Ann Arbor, MI (steering committee member) http://miphtcdev.web.itd.umich.edu/trainings/blue-skies-green-allies-role-all-sectors-environmental-health September 16, 2015

5. Clean Diesel 10: National Clean Diesel Campaign Tenth Anniversary Celebration, Washington, DC (steering committee chairperson, technical conference chairperson, staffed EPA Assistant Administrator Gina McCarty and EPA Office Director) October 19-20, 2010

6. U.S. EPA Regional Administrators' Leadership Forum: Ports and Sustainability Strategic Planning, Baltimore, MD (steering committee chairperson, staffed EPA Office Director) July 14, 2010

7. 2009 World Maritime Day Co-Located Event, New York, NY (steering committee member, staffed U.S. EPA Assistant Administrator Gina McCarty, assisted with award to International Maritime Organization Secretary General and recognition of Consul General for the Netherlands) October 16-18, 2009

8. U.S. EPA Diesel Emissions Reduction Act Regional Collaborative Leadership meeting, San Diego, CA, (Steering committee member) February 2009

9. U.S. EPA Regional Administrator's Leadership Forum: Goods Movement and Marine Ports Strategic Planning, New York, NY (Steering committee member, staffed EPA Office Director) September 2008

10. U.S. EPA National Clean Diesel Campaign Regional Leadership Forum, Baltimore, MD (Steering committee member) 2007

11. Clean Ships: Advanced Technology for Clean Air, San Diego, CA (Steering committee chairperson, technical conference chairperson, staffed EPA Assistant Administrator) February 7-9, 2007

12. U.S. EPA Regional Administrator's Leadership Forum: Implications of Port Operations and Growth, Ports Strategic Planning Retreat, Long Beach, CA (Steering committee chairperson, staffed Deputy EPA Administrator Marcus Peacock and EPA Regional Administrator Steve Johnson) September 6 -7, 2006

13. Clean Ports USA Technology Workshops, Seattle, WA; Duluth, MN; New York, NY; Philadelphia, PA; Houston, TX, 2005-2006 (managing director)

14. U.S. EPA National Clean Diesel Campaign, Policy Leaders Summit, Baltimore, MD, (steering committee member), February 2005

15. Clean Ports USA Summit, Corpus Christi, TX (Steering committee chairperson, conference chairperson), January 2005

Posters and Conference Proceedings

1. Sutton, P., J. Lam, **P.D. Koman**, T.J. Woodruff. The perils and promise of TSCA for protecting children from exposure to toxic environmental chemicals. American Public Health Association, Atlanta, GA, October 2017 (*abstract accepted for oral presentation*)

2. **Koman, P.D**. N. Sampson, R. Mandell, C.M. Coombe, M.M. Tetteh, Y. Hill-Ashford, D. Wilkins, R. Loch-Caruso, A. J. Schulz, T Woodruff. Air Pollution Exposure and Susceptibility in Pregnant Women: Improving Public Health Protection under the Clean Air Act. American Public Health Association, Atlanta, GA, October 2017 (*abstract accepted for oral presentation*)

3. **Koman, P.D.**, S. Bailey, E. DeLoney, D Moses, K. Keys, S. Cupal, M. Munroe-Younis, T. Dvonch. "Community Participatory Principals in Water Quality Environmental Education Program in Flint, MI" Genesee County Health Department Conference, Flint, MI, May 9, 2017

4. French, N.H., K. Anthony, K. Baker, M. Billmire, S. Hoshiko, J. Hutchinson, J. Johnson, **P.D. Koman**, B. Koziol, V. Limaye, J. McCarty, R. C. Owen, C. Reid, B. Thelen, S. Wu. Approaches and challenges to connecting exposure to air pollution from wildland fire emissions to health outcomes. Planetary Health and GeoHealth Annual Meeting, Boston, MA, April 29, 2017

5. **Koman, P.D.**, F. Romo, C. Gray, N. Sampson, S. Landfried, M. Battaglia, K Hill-Knott, N.H. French, M.S. O'Neill, A.J. Schulz. MI-Environment Geospatial Analysis: Promoting Climate-Related Health within Michigan Vulnerable Communities. Planetary Health and GeoHealth Annual Meeting, Boston, MA, April 29, 2017

6. **Koman, P.D.**, F. Romo, C. Gray, N. Sampson, S. Landfried, M. Battaglia, M.S. O'Neill, A.J. Schulz. MI-Environment: Climate and Health in Michigan. National Institute for Environmental Health Sciences (NIEHS) 50th Anniversary Research conference, Durham, NC, December 8, 2016

7. **Koman, P.D.**, F. Romo, C. Gray, N. Sampson, S. Landfried, M. Battaglia, M.S. O'Neill, A.J. Schulz. MI-Environment: Promoting Climate-Related Health within Michigan Vulnerable Communities. American Public Health Association, Denver, CO, October 31, 2016

8. **Koman, P.D**. K. Hogan, K. Ferguson, R. Mandell, N. Sampson, C.M. Coombe, Y. Hill-Ashford, M.M. Tetteh, D. Wilkins, R. Loch-Caruso, A. J. Schulz, T Woodruff. Air Pollution Exposure and Susceptibility of Pregnant Women: Gender Disparities in Public Health Protection under the Clean Air Act. Social Determinants of Health Conference. George

Mason University School of Policy, Government and International Affairs. Arlington, VA. September 15, 2016

9. **Koman, P.D.** and P. Mancuso. Ozone exposure, obesity and occupational health. University of Michigan, School of Public Health, Center for Occupational Health & Safety Engineering symposium, Ann Arbor, MI, March 18, 2016

10. **Koman, P.D.** and P. Mancuso. Ozone exposure, obesity and cardiopulmonary health. University of Michigan, School of Public Health, Environmental Health Sciences Department Symposium, Ann Arbor, MI, January 22, 2016

11. **Koman, P.D.**, R. Adhikari, S.D. Adar, B.S. Kweon, P. Mohai, "Michigan School Children Proximity to Leaking Underground Storage Tanks and Hazardous Waste Treatment, Storage and Disposal Sites," American Public Health Association, Chicago, IL, November 4, 2015

12. Norton, R.K., P. Fontaine, E. Gerber, G. Hohner, **P.D. Koman**, J. Kosteva. "Generating Multidisciplinary Synergies across Community-Engaged Courses," University of Michigan, Center for Learning and Teaching Research conference, http://www.crlt.umich.edu/tip_winners, Ann Arbor, MI, May 5, 2015

13. **Koman, P.D.**, R. Adhikari, S.D. Adar, B.S. Kweon, P. Mohai, "Michigan School Children Proximity to Leaking Underground Storage Tanks and Hazardous Waste Treatment, Storage and Disposal Sites," University of Michigan, Environmental Health Sciences Department Symposium, Third Place poster award, Ann Arbor, MI, January 23, 2015

14. **Koman, P.D.,** P. Goldberg, C. Klawuhn, M. Swain, P.D. Meadows, "Environmental Health Professionals Training Needs Assessment," University of Michigan, Environmental Health Sciences Department Symposium, Ann Arbor, MI, January 23, 2015

15. Hill-Ashford, Y., **P.D. Koman**, K. Hogan, R. Mandell, A.J. Schulz, M. Tetteh, D. Wilkins, "Engaging community and academic partners in efforts to refine definitions of vulnerable populations: Detroit Reproductive Environmental Advocacy Matters (DREAM) Team," American Public Health Association conference, 299816, New Orleans, LA, November 17, 2014

16. Adar, S.D., M.S. Daskin, S.R. Gosman, **P.D. Koman**, B.S. Kweon, P. Mohai, "School Siting: Are Michigan Schools Safeguarding Children's Environmental Health," University of Michigan, MCubed Symposium, Ann Arbor, MI, October, 2014 (authors listed alphabetically)

17. Hogan K.A., M. Tetteh, R. Mandell, Y. Hill-Ashford, D. Wilkins, L. Nguyen, **P.D. Koman**, A.J. Schulz, C. Thomasson, S. Dernek, J. Jones, D. Ogunyemi, R. Loch-Caruso, "The DREAM Team and Clinical Allies Go to Washington: Environmental Reproductive Advocacy in Action," Michigan Community Health and Research Conference, Ann Arbor, MI, October 1, 2014

18. Thorpe, K., D. Thoe, **P.D. Koman**, "Michigan Engaging Community Through the Classroom: Willow Run Sustainability Project," University of Michigan, Undergraduate Research Opportunity Program (UROP) Symposium, Blue ribbon winner, Ann Arbor, MI, August 2014

19. Burke, M.N., **P.D. Koman**, P. Goldberg, C. Klawuhn, M. Swain, P.D. Meadows, "Environmental Health Professionals' Training Needs Assessment," University of Michigan, Undergraduate Research Opportunity Program (UROP) Symposium, Ann Arbor, MI, April 2014

20. Adar, S.D., M.S. Daskin, S.R. Gosman, **P.D. Koman**, B.S. Kweon, P. Mohai , "School Siting: Are Michigan Schools Safeguarding Children's Environmental Health," University of Michigan, MCubed Symposium, Ann Arbor, MI, November 15, 2013 (authors listed alphabetically)

21. **Koman, P.D.**, M. Arquero De Alarcon, P. Fontaine, C. Wilson, A. Yee, P. Barclay, M. Duchemin, N. Hall, A. Hing, Y. Mazloomdoost, E. Yu, D. Smith, P. Goldberg, D. Smith, D. Hawkins, P. Meadows, "Michigan Engaging Community

Through The Classroom. Collaborative community health impact assessment in the industrial landscapes of the Rust Belt: The Willow Run Project," Michigan Community Health and Research Conference, Ann Arbor, MI, March 19, 2013

22. Yee, A.K., **P.D. Koman**, M. Arquero de Alarcon, P. Barclay, M. Duchemin, P. Fontaine, P. Goldberg, N. Hall, A. Hing, Y. Mazloomdoost, E. Yu, D. Smith, D. Hawkins, C. Wilson, P. Meadows, "Michigan Engaging Community Through The Classroom. Community health and quality of life in the living industrial landscapes of the Rust Belt: The Willow Run Project," Poster and presentation at University of Michigan Rackham Graduate School Students of Color Conference, Ann Arbor, MI, March 22- 23, 2013

23. **Koman, P.D.**, C. Wilson, A. Yee, P. Barclay, M. Duchemin, N. Hall, A. Hing, Y. Mazloomdoost, E. Yu, D. Smith, P. Goldberg, P. Meadows, "Michigan Engaging Community Through The Classroom. Preliminary Health Impact Assessment." Poster and presentation at University of Michigan MECC final conference for project stakeholders, April 25, 2013; featured in AnnArbor.com news article

24. **Koman, P.D.**, Newstead, S., Keller, J., "Clean School Bus USA: Tomorrow's Buses for Today's Children," US EPA 3rd Annual Science Forum, Washington, DC June 2004

25. **Koman, P.D.**, Keller, J., Hubbell, B.J., "Reducing School Bus emissions: Successful solutions and practical applications," American Public Health Association 132rd Annual Meeting 5026.0 Disparities in Vulnerable Populations, Washington, DC, November 6-10, 2004

26. Hubbell, B., **P.D. Koman**, T. Fox, D. McCubbin, K. Davidson, P Dolwick. Health benefits of reducing particulate air pollution from nonroad diesel engines. Epidemiology. 15(4):S137. July 2004. ISSN: 1044-3983. DOI:1097/00001648-200407000-00355.

27. Hubbell, B., **P.D. Koman**, T. Fox, N.J. Possiel, G. Stella, B. Timin. Health benefits of reducing air pollution from heavy duty diesel engines. http://www.epa.gov/ttn/ecas/workingpapers/hddben.pdf, Research Triangle Park, NC, 2001

28. Hubbell, B.J., **Koman, P.D.**, Laurence, J., Heninger, B., Petro, A., Mills, J. and Haynes, R. "Integrated Forestry Ozone Regulatory Modeling System," Future Directions in Air Quality Research, North Carolina State University, Research Triangle Park, NC, February 12, 2001

29. Rogers, C.F., J.C. Chow, J.G. Watson, C.A. Cahill, S. Diaz , **P.D. Koman** , S. Sleva, R. Tropp, "Mineral Dust Contributions to Fine Particle Mass," Air & Waste Management Association, pp.168-176. January 1998

30. Small, M., Eklund, P., **Koman, P.D.** "Streamlining and Prioritizing Leaking Underground Storage Tank Site Corrective Action Programs," Proceedings of Air and Waste Management Conference, Accelerating Underground Storage Tank Corrective Action, Vol. 31, pp. 38-49, San Antonio, TX, March 1993

Preparation for Teaching

1. Participant, Graduate teaching certificate coursework, University of Michigan, Rackham Graduate School, Center for Research on Teaching and Learning, under mentorship of Dr. Phyllis Meadows, Health Management and Policy

    - Writing and Grading Exams virtual workshop, June 2015
    - Preparing Future Faculty Seminar, Spring Term 2015
    - Advanced Strategies for Inclusive Teaching workshop, March 2015
    - Graduate Student Instructor Orientation, January 2014

2. Syllabus design workshop. University of Michigan, Rackham Graduate School, Arts of Citizenship. Fall term 2014

3. Graduate Student Instructor Spring Board to Teaching seminar. University of Michigan, School of Public Health. Ann Arbor, MI. Fall 2013

Teaching, Training and Instruction

1. Practitioner roundtable for Rackham's Institute for Social Change introduction to public scholarship, "Working for Social Justice Inside and Outside Academia," University of Michigan, Rackham Graduate School, Ann Arbor, MI August 22, 2017

2. Master Class instructor, "Transportation Affects Health," Movin'On Michelin World Summit on Sustainable Transportation, Montreal, Canada, June 14, 2017

3. Guest lecture for Future Public Health Leaders program, for 40 undergraduate Center for Disease Control and Prevention scholars. "Environmental Health Sciences." University of Michigan, School of Public Health, Ann Arbor, MI, May 25, 2017

4. Curriculum co-developer, "Environmental Justice Academy" community-based participatory research partnership. Winter Term 2017

5. Curriculum developer and trainer, "See for Yourself: What's in Your Water" water quality and drinking water delivery system training for 500 community members and K-12 students in Flint, MI. Fall 2016 and Winter Term 2017

6. Assistant course instructor, PH600, Cross-disciplinary approaches to public health challenges, 4 credits, University of Michigan, School of Public Health, Associate Dean Phyllis Meadows. Winter Term 2016

7. Guest lecture for Future Public Health Leaders program, for 40 undergraduate Center for Disease Control and Prevention scholars. "Health Impact Assessment." University of Michigan, School of Public Health, Ann Arbor, MI. Associate Dean Phyllis Meadows. June 2015

8. Guest lecture for webinar, University of California San Francisco, Obstetrics, Gynecology and Reproductive Sciences, Reach the Decision Maker Fellows, for 50 health professionals, "Strategies for Effective Communication with the U.S. Environmental Protection Agency," Dr. Tracey Woodruff. June 2015

9. Guest lecture for Future Public Health Leaders program, for 40 undergraduate Center for Disease Control and Prevention scholars. "Environmental Health Sciences." University of Michigan, School of Public Health, Ann Arbor, MI. Associate Dean Phyllis Meadows. June 2015

10. Koman, P.D. "Climate Change and Human Health," Keynote. University of Michigan School of Public Health and Michigan Association for Local Public Health Day, Ann Arbor, MI, March 9, 2015 Available as Michigan Public Health Training Center on-line training: http://miphtcdev.web.itd.umich.edu/trainings/climate-change-and-human-health

11. Guest lecture for Future Public Health Leaders program, for 50 undergraduate Center for Disease Control and Prevention scholars. "Fundamentals of Health Impact Assessment." University of Michigan, School of Public Health, Ann Arbor, MI. Associate Dean Phyllis Meadows. July 2014

12. Invited trainer, University of California San Francisco, Obstetrics, Gynecology and Reproductive Sciences, Reach the Decision Maker Fellows, for 25 health professionals nationwide, "Making Your Case in Environmental Policy," Reach the Decision Maker Program, Washington, DC, Dr. Tracey Woodruff. May 2014

13. Guest lecture for webinar, University of California San Francisco, Obstetrics, Gynecology and Reproductive Sciences, Reach the Decision Maker Fellows, for 50 health professionals, "Effective Communication with the Environmental Protection Agency," Dr. Tracey Woodruff. June 2014

14. Guest lecture for Future Public Health Leaders program, for 50 undergraduate Center for Disease Control and Prevention scholars. "Introduction to Environmental Health Sciences." University of Michigan, School of Public Health, Ann Arbor, MI. Associate Dean Phyllis Meadows. June 2014

15. Guest lecture for 25 urban planning masters students, "Building Healthy Communities: Children's Environmental Health and Hazardous Substance Clean Up Criteria in Michigan." University of Michigan, Urban Planning Department. Ann Arbor, MI. UP 502 Environmental Planning, Issues and Concepts. Assistant Professor Ana Paula Pimental Walker. Fall 2013

16. Guest lecture for Future Public Health Leaders program, for 50 undergraduate Center for Disease Control and Prevention scholars. "Introduction to Environmental Health Sciences." University of Michigan, School of Public Health, Ann Arbor, MI. Associate Dean Phyllis Meadows. June 2013

17. Guest lecture on air quality and marine ports for masters students. University of Michigan, School of Public Health, Environmental Health Sciences. Ann Arbor, MI. EHS 572/SNRE 514 Environmental Impact Assessment. Professor Stuart Batterman. Fall 2012

18. Guest lecture for graduate students, "Ship Air Emissions and Controls," University of Michigan, College of Engineering, Naval Architecture and Marine Engineering. Ann Arbor, MI. Professor Jing Sun. Winter 2007

19. Trainer and course developer, "EPA Mobile Source Emissions software MOVES2010b Pilot Training Course." International Emissions Inventory Conference. 8-hour training, Tampa, FL. August 13, 2012

20. Trainer, "MOVES 3-Day Training Course," EPA Mobile Source Emissions Modeling 3-day computer-based training, Lansing, MI. May 2012

21. Trainer, "Effectively Communicating Key Messages," EPA's National Clean Diesel Campaign Regional Office Partners meeting. Washington, DC. December 9, 2005

Selected Presentations

1. **Koman, P.D.**, French, N.H., M.S. O'Neill, J.T. Dvonch, C. Reid, S. Hoshiko, K. Baker, M. Billmire, B. Thelen, S. Wu, A. Steiner. Atmospheric Modeling in Human Health & Climate Change Risk Assessment: Wildfire Smoke Exposures. Graham Institute external advisory board annual meeting, Ann Arbor, MI, April 13, 2017

2. **Koman, P.D.**, F. Romo, C. Gray, N. Sampson, S. Landfried, M. Battaglia, M.S. O'Neill, A.J. Schulz. MI-Environment: Promoting Climate-Related Health within Michigan Vulnerable Communities. University of Michigan Environmental Epidemiology research seminar, Ann Arbor, MI, February 14, 2017

3. **Koman, P.D.**, F. Romo, C. Gray, N. Sampson, S. Landfried, M. Battaglia, R Goodspeed, M.S. O'Neill, A.J. Schulz. MI-Environment: Heat Stress Vulnerability in Michigan Communities. Michigan University-wide Sustainability & Environment, Ann Arbor, MI, February 9, 2017

4. **Koman, P.D.** "Health Equity at Industrial Scale: What Every Public Health Professional Needs to Know about the Lautenberg Chemical Safety Act," California Department of Health research seminar, Richmond, CA, January 30, 2017

5. **Koman, P.D.,** M. Munroe-Younis. "See for Yourself: What's in Your Water?" Flint Neighborhood Recovery Resource Meeting, Flint, MI, January 5, 2017

6. **Koman, P.D.,** A. Jakkaraju, M. Halso, K. Heidecorn, C. Xi, T.M. Olson. "See for Yourself: What's In Your Water? Environmental Education Model Building." Environmental Water Resources Engineering Program Symposium, Ann Arbor, MI, October 21, 2016

7. **Koman, P.D.**, F. Romo, C. Gray, N. Sampson, S. Landfried, M. Battaglia, M.S. O'Neill, A.J. Schulz. MI-Environment: Promoting Climate-Related Health within Michigan Vulnerable Communities. American Public Health Association, Denver, CO, October 31, 2016

8. **Koman, P.D.** "See for Yourself: What's in Your Water?" Genesee County Steering Prevention Reducing Obesity Utilizing Teamwork (SPROUT), Genesse County Health Department, November 14, 2016

9. Panelist, Future Public Health Leaders program for 40 undergraduate Center for Disease Control and Prevention scholars, "Public Health Careers," University of Michigan, School of Public Health, Ann Arbor, MI. PI Associate Dean Phyllis Meadows. July 18, 2016

10. Norton, R.K., P. Fontaine, E. Gerber, G. Hohner, **P.D. Koman**, J. Kosteva. "Michigan Engaging Community Through the Classroom," University of Michigan, Center for Learning and Teaching Research conference, May 16, 2016

11. **Koman, P.D.,** keynote presentation, "Climate Change and Human Health" Genesee County Health Department 10th Annual Public Health Conference, Flint, MI, May 3, 2016

12. **Koman, P.D.**, F. Romo, S. Landfried, M O'Neill. "MI-Environment: Heat Vulnerability Mapping Interactive Tool" Michigan Lifestage Environmental Exposure & Disease Center pilot, Science Cafe, Detroit, MI, March 24, 2016

13. **Koman, P.D.**, Detroiters Working for Environmental Justice – "Communicating Climate Change and Health" interactive icebreaker activity at Climate Action Plan meeting in Detroit, MI

14. **Koman, P.D.,** invited panelist, "Engaging Community Partners," University of Michigan, Rackham Graduate School Arts of Citizenship Program training, Ann Arbor, MI, November 13, 2015

15. **Koman, P.D.,** invited speaker, "Climate Change and MI-Environment Heat Vulnerability Index: Opportunities for Research and Partnerships," University of Michigan, NIEHS Community Outreach & Engagement Core, Michigan Lifestage Environmental Exposure & Disease Center, Faculty and partners mobile meeting, Detroit, MI, November 13, 2015

16. F. Romo, M. Battaglia, **Koman, P.D.**, S. Landfried, M O'Neill, R. Goodspeed. "MI-Environment: Hazard Proximity in Kent County," Michigan Technology Research Institute, Ann Arbor, MI, October 30, 2015

17. **Koman, P.D.,** invited panelist, "Innovative Research," University of Michigan, Rackham Graduate School Donors Celebration Dinner, Ann Arbor, MI, October 9, 2015

18. Gronlund, C, **Koman, P.D.**, Cameron, L., Bryan, D. "Climate Change in Michigan: Human Health, Resilience, and Equity," Michigan Association for Local Public Health Premier Conference, Thompsonville, MI, October 7, 2015

19. **Koman, P.D.**, K. Huber, F. Romo, S. Landfried, R. Goodspeed, M O'Neill. "MI-Environment: Heat Vulnerability Mapping" NIEHS Community Outreach & Engagement Core, Michigan Lifestage Environmental Exposure & Disease Center, Stakeholder Advisory Board Meeting, Detroit, MI, July 22, 2015.

20. **Koman, P.D.,** national webinar, University of California San Francisco, Obstetrics, Gynecology and Reproductive Sciences, Reach the Decision Maker Fellows, for 50 health professionals, "Strategies for Effective Communication with the U.S. Environmental Protection Agency," June 2015

21. **Koman, P.D.**, P. Goldberg, C. Klawuhn, M. Swain, P.D. Meadows, "Michigan Environmental Health Professionals' Training Needs," Michigan Environmental Health Association conference, Traverse City, MI, March 20, 2015

22. **Koman, P.D.**, P. Goldberg, C. Klawuhn, M. Swain, P.D. Meadows, "The Future of Michigan Public Health Professionals: Strategic Directions and Training Needs," Michigan's Premier Public Health Conference, Michigan Association for Local Public Health, Bellaire, MI, October 22, 2014

23. **Koman P.D.**, "Risk Miscues and Mixed Messages: What is a Transportation Planner to Do?" 93rd Annual Transportation Research Board Conference, Washington, DC, January 12, 2014

24. **Koman, P.D**. and P. Mancuso, "Implications of Obesity Trends for Designating At-risk Populations in the Ozone and Particulate Matter National Ambient Air Quality Standards," American Public Health Association, 141st Annual Meeting, Boston, MA, November 4, 2013

25. **Koman, P.D.** "Understanding Michigan's Remediation and Redevelopment Program: What Every Public Health Official Needs to Know," Michigan's Premier Public Health Conference, Michigan Association for Local Public Health, Bay City, MI, October 17, 2013

26. **Koman, P.D.**, speaker and panel moderator, "Nonroad Engine Emissions Modeling," International Emissions Inventory Conference, Tampa, FL, August 16, 2012

27. **Koman, P.D.**, "Diesel Emissions Reduction Act Funding and Reauthorization," American Association of Port Authorities, Harbors, Navigation and Environment Committee Webinar, Charleston, SC, September 1, 2010

28. **Koman, P.D.**, "Diesel Emissions Reduction Act Reauthorization," Greenports and American Association of Port Authorities, Harbors, Navigation and Environment Committee Seminar, May 4-6, 2010

29. **Koman, P.D.**, keynote panel, "Future of the National Clean Diesel Campaign," Southeast Diesel Collaborative Annual Partners Meeting, Atlanta, GA, June 2009

30. **Koman, P.D.**, "Clean Ports USA," EPA Diesel Emissions Reduction Act Regional Collaborative Leadership meeting, San Diego, CA, February 2009

31. **Koman, P.D.**, "Sustainable Future - Hydraulic Hybrid Yard Hostler," U.S. – Taiwan Bilateral Environmental Cooperation meetings, and Taipei, Taiwan November 2008

32. **Koman, P.D.**, "Lessons from New York - Hydraulic Hybrid Yard Hostler," Pacific Ports Air Quality Conference, Kaohsiung, Taiwan, November 2008

33. **Koman, P.D.**, "U.S. Perspectives on Reducing Air Pollution from Ocean-Going Vessels," American Association of Port Authorities Conference, Panama City, Panama, May 2008

34. **Koman, P.D.**, "National Clean Diesel Campaign," Faster Freight - Cleaner Air, Los Angeles, CA, March 2008

35. **Koman, P.D.**, moderator and panel speaker, "Clean Ports USA: Reducing Emissions from Marine Engines," Faster Freight - Cleaner Air, Los Angeles, CA, March 2008

36. **Koman, P.D.**, "Communication and Outreach," EPA National Clean Diesel Campaign Regional Leadership Forum, Baltimore, MD, 2007

37. **Koman, P.D.**, "Clean Ports USA: Navigating to Cleaner Air," EPA National Clean Diesel Campaign Regional Leadership Forum, Baltimore, MD 2007

38. **Koman, P.D.**, "Clean Ports USA: Great Ideas for the Great Lakes," Great Lakes Ports Association Directors' Meeting, Cleveland, OH, June 2006

39. **Koman, P.D.**, "Clean Ports USA: Navigating toward Cleaner Air," State and Territorial Air Pollution Program Administrators (STAPPA) / Association of Local Air Pollution Control Officers (ALAPCO) annual meeting, Madison, WI, May 21-25, 2005

40. **Koman, P.D.**, "Clean Ports USA," National Association of Waterfront Employers' annual executives meeting, Charlotte, NC, April 2005

41. **Koman, P.D.**, "Clean Ports USA," Clean Ports USA Summit, Corpus Christi, TX, January 26, 2005

42. **Koman, P.D.**, "Clean School Bus USA Demonstration Projects," National Retrofit Conference, Washington, DC, June 2004

43. **Koman, P.D.**,"Clean School Bus USA," Maricopa Association of Governments, Phoenix, AZ, March 2004

44. **Koman, P.D.**, keynote speaker, "Moving the Air Toxics Program Forward," American Forest and Paper Association Conference, Research Triangle Park, NC, April 1999

45. **Koman, P.D.**, keynote speaker, "Pollution Prevention in EPA's Industrial Surface Coating National Emission Standards for Hazardous Air Pollutants," National Pollution Prevention Roundtable, Cincinnati, OH, May 1998

46. **Koman, P.D.**, "Ten Year Surface Coating National Emission Standards for Hazardous Air Pollutants," Air Toxics Implementation Workshop, Research Triangle Park, NC, August 1997

47. Trainer for nationally broadcast program (answering live questions from air pollution regulators, industry representatives, and other participants) regarding the final decision to revise the ozone and particulate matter (PM) national ambient air quality standards (NAAQS), July 1997

48. **Koman, P.D.**, keynote plenary address, "Proposed Revisions to the PM NAAQS," Air and Waste Management Association (AWMA) Utilities and Acid Rain Conference, Phoenix, AZ, January 1997

49. **Koman, P.D.**, plenary speaker, "Proposed Revisions to the PM NAAQS," American Forest and Paper Association Conference, Research Triangle Park, NC, February 1997

50. National spokesperson for proposed revisions to the PM NAAQS at Air and Waste Management Association public seminars, January and February 1997, at the following locations:

- Atlanta, GA	- New York, NY
- Chicago, IL	- Phoenix, AZ
- Hartford, CT	- Pittsburgh, PA
- Los Angeles, CA	- Research Triangle Park, NC

51. Presenter to Japanese and Russian delegation regarding the proposed revisions to the ozone and PM NAAQS, Research Triangle Park, NC, 1997

52. Lead presentation with in-depth 3-hour question-and-answer session at WESTAR meeting for Western State and local air pollution officials regarding proposed revisions to the PM NAAQS, Palm Springs, CA, December 1996

53. Trainer for seminar broadcast nationally (answering questions faxed in from air pollution regulators, industry representatives, and other participants) regarding proposed revisions to the Ozone and PM NAAQS, December 1996

54. Small, M., Eklund, P., **Koman, P.D.** "Streamlining and Prioritizing Leaking Underground Storage Tank Site Corrective Action Programs," US EPA National Underground Storage Tank Conference, Washington, DC, March 1993

Affiliations

- International Society for Environmental Epidemiology (2015- present)
- International Epidemiology Association (2016- present)
- American Public Health Association (2004, 2012- present)
- Michigan Engaging Community Through the Classroom Advisory Committee (2013- present)
- Mentor, Reach the Decision Makers program, University of California at San Francisco (2013 – 2016)
- Navigation Guide Group, University of California at San Francisco Program on Reproductive Health and the Environment (2012 – present)
- American Association of Port Authorities, Harbors Navigation and Environment Committee (associate member, 2005- 2011)

Exhibit 3

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

SAFER CHEMICALS, HEALTHY FAMILIES et al., *Petitioners,* v. U.S. ENVIRONMENTAL PROTECTION AGENCY et al., *Respondents.* IPC INTERNATIONAL, INC. et al., *Respondents-Intervenors.*	Docket No. 17-72260 Consolidated with Docket Nos. 17-72501, 17-72968, 17-73290, 17-73383, 17-73390

DECLARATION OF DETLEF KNAPPE, PH.D., IN SUPPORT OF PETITIONERS' OPENING BRIEF

I, DETLEF KNAPPE, do hereby affirm and state:

Introduction and Qualifications

1. I am an environmental engineer. I hold a B.S. in Civil Engineering from the University of Illinois at Urbana-Champaign (1989). I received M.S. (1991) and Ph.D. (1996) degrees in Environmental Engineering from the University of Illinois at Urbana-Champaign.

2. I am a Professor in the Department of Civil, Construction, and Environmental Engineering at North Carolina State University in Raleigh. I teach two graduate courses (Chemical Principles of Environmental Engineering;

Physical-Chemical Water Treatment Processes) and one undergraduate course (Environmental Chemistry and Microbiology).

3. My research focuses on (1) developing and evaluating physical-chemical treatment processes for the control of trace organic contaminants (e.g., carcinogenic volatile organic contaminants, 1,4-dioxane, fluorochemicals, endocrine-disrupting chemicals, antibiotics, and other pharmaceutically active compounds), and (2) developing information about the effects of reactive and unregulated wastewater contaminants on drinking water quality and treatment—information that is not provided under the federal Clean Water Act or Safe Drinking Water Act.

4. I am a member of the Drinking Water Committee of the United States Environmental Protection Agency's Science Advisory Board. I am also a member of the Science Advisory Board of the North Carolina Department of Environmental Quality and the North Carolina Department of Health and Human Services

5. I serve as a Trustee for the Water Science and Research Division of the American Water Works Association, and am a member of the Association's Activated Carbon Standards Committee and the Organic Contaminants Research Committee.

6. A more complete description of my educational and work experience, as well as a complete list of my publications, is appended as Exhibit A.

7. By virtue of my engineering training, my research, my professional service, and knowledge of pertinent scientific literature, I consider myself—and others in the field consider me to be—an expert on trace organic contaminants and their effects on drinking water quality and treatment.

8. All of the information set forth in this declaration is based upon my education, personal knowledge, and experience.

What is 1,4-dioxane?

9. 1,4-Dioxane is an organic compound produced for commercial purposes. It is also a manufacturing by-product.

10. In the past, the dominant commercial use of 1,4-dioxane was for the stabilization of certain solvents. The use of 1,4-dioxane as a solvent stabilizer has decreased since 1995 when production of one such solvent was phased out under the Montreal Protocol (an international treaty) because of its ozone depletion potential.

11. Currently, 1,4-dioxane is used as a chemical reactant, solvent, and processing aid in many industries, such as textile processing, specialty chemical manufacturing (e.g., pharmaceuticals, pesticides), recycling, wood pulping,

manufacturing of polyethyleneterephthalate (PET) plastics, cellulose acetate, resins, waxes, and fats.[1]

12. 1,4-Dioxane can also be produced as a by-product in manufacturing processes, including production of polyester and surfactants used in detergents and shampoos.

13. 1,4-Dioxane is an impurity in some consumer products, including detergents, waxes, varnishes, and personal care products such as shampoos and cosmetics.

14. Reliable current 1,4-dioxane production volumes in the United States are not available because much of the information is considered confidential business information. Furthermore, there is no reliable information on the volume of by-products generated.

15. There is no federal drinking water standard for 1,4-dioxane.

16. Several states have developed drinking water standards or guidelines for 1,4-dioxane.

17. In North Carolina, a narrative surface water quality standard exists. 15A NCAC 02B .0208 states that "for carcinogens, the concentrations . . . shall not

[1] U.S. EPA, Rep. No. EPA-HQ-OPPT-2016-0723, Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: 1,4-Dioxane (2017), https://www.epa.gov/sites/production/files/2017-02/documents/14-dioxane.pdf.

result in unacceptable health risks and shall be based on a Carcinogenic Potency Factor. An unacceptable health risk for cancer shall be considered to be more than one case of cancer per one million people exposed (one-in-a-million risk level)." For 1,4-dioxane, the one-in-a-million risk level corresponds to a concentration of 0.35 μg/L (or parts per billion).

How widespread is 1,4-dioxane contamination of drinking water in the U.S.?

18. The U.S. Environmental Protection Agency (EPA) assessed the occurrence of 1,4-dioxane in U.S. drinking water as part of the Third Unregulated Contaminant Monitoring Rule (UCMR3).[2] Between January 1, 2013, and December 31, 2015, more than 36,000 drinking water samples were collected across the United States and submitted for 1,4-dioxane analysis. These samples came from almost 5,000 public water systems in the United States, each of which serves more than 10,000 people. Nationwide, 1,4-dioxane was detected in 21.9% of public water systems, and 1,4-dioxane levels exceeded 0.35 μg/L—the one-in-a-million risk level—in 6.9% of public water systems. More than 75% of all 1,4-dioxane detections in U.S. drinking water were associated with **groundwater** sources.

[2] *See* U.S. EPA, Occurrence Data for the Unregulated Contaminant Monitoring Rule, https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule#3.

19. Compared to the entire United States, 1,4-dioxane occurs more frequently in North Carolina drinking water. Between January 1, 2013, and December 31, 2015, as part of the UCMR3, more than 1,300 drinking water samples were collected across North Carolina and submitted for 1,4-dioxane analysis. These samples came from 151 public water systems that serve more than 10,000 people. In North Carolina, 1,4-dioxane was detected in 30.5% of public water systems, and 1,4-dioxane levels exceeded 0.35 μg/L in 15.9% of public water systems. More than 95% of all 1,4-dioxane detections in North Carolina were associated with **surface water** sources.

How does 1,4-dioxane enter drinking water sources?

20. Most drinking water in the United States is produced from groundwater or surface water.

21. 1,4-Dioxane can enter groundwater from leaking underground storage tanks that contain(ed) solvents stabilized with 1,4-dioxane, from unlined landfills, and from wastewater lagoons.

22. 1,4-Dioxane can enter surface water through municipal and industrial wastewater treatment plant discharges.

23. The concentration of 1,4-dioxane in U.S. municipal wastewater discharges is typically found at levels that are associated with the use of consumer

products such as laundry detergents and shampoos. These levels generally range from 0.3 to 3 μg/L.[3]

24. In many communities, industrial wastewater is pre-treated and discharged to the municipal sewer. Because 1,4-dioxane is an unregulated contaminant, its possible presence is typically not considered when pre-treatment programs evaluate the discharge from an industrial wastewater treatment plant to a municipal sewer system.

25. If an industrial wastewater discharge to a municipal sewer contains high levels of 1,4-dioxane, it will elevate the 1,4-dioxane concentration of the wastewater reaching the municipal wastewater treatment plant. Municipal wastewater treatment plants cannot effectively remove 1,4-dioxane. Therefore, 1,4-dioxane concentrations will be high in the discharge of municipal wastewater treatment plants that receive industrial wastewater with elevated 1,4-dioxane concentrations.

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[3] Staci Massey Simonich et al., Probabilistic analysis of risks to US drinking water intakes from 1,4-dioxane in domestic wastewater treatment plant effluents, 9 Integ. Envtl. Assess. Mgmt. 554 (2013), https://setac.onlinelibrary.wiley.com /doi/epdf/10.1002/ieam.1448; Detlef R. U. Knappe et al., U. N.C. Water Res. Research Inst., Rep. No. 478, Occurrence of 1,4-Dioxane in the Cape Fear River Watershed and Effectiveness of Water Treatment Options for 1,4-Dioxane Control (2016), https://repository.lib.ncsu.edu/bitstream/handle/1840.20/34331/UNC-WRRI-478.pdf?sequence=1&isAllowed=y [hereafter Cape Fear Report].

26. In 2015, in North Carolina, the Department of Environmental Quality and North Carolina State University monitored 1,4-dioxane concentrations in the Cape Fear River watershed. Monthly samples were collected from October 2014 to October 2015 and analyzed. Discharges of three municipal wastewater treatment plants were found to be significant sources of 1,4-dioxane. The highest 1,4-dioxane concentrations (up to 1,700 μg/L) were observed in the headwaters of the Cape Fear River watershed just downstream of the three wastewater treatment plant discharges. Median 1,4-dioxane concentrations decreased in a downstream direction with increasing distance from the identified sources. However, the concentration of 1,4-dioxane stayed above the one-in-a-million risk level throughout the watershed.

How persistent is 1,4-dioxane in aquatic systems?

27. The molecular structure of 1,4-dioxane makes it stable and relatively immune to environmental degradation as it moves through a watershed.

28. Watershed monitoring data for the Cape Fear River basin in North Carolina are consistent with the persistent nature of 1,4-dioxane. Monthly monitoring in two rivers over a one-year period (October 2014-October 2015) demonstrated that mass flows of 1,4-dioxane remained stable over a 200-km-stretch of the Cape Fear River that had no substantial 1,4-dioxane inputs.[4] Similar

[4] Cape Fear Report.

results showing no losses of 1,4-dioxane were observed over a 120-km-stretch of the Deep River.

How can 1,4-dioxane be removed in drinking water treatment plants?

29. 1,4-Dioxane is not removed in conventional surface water treatment plants. Conventional surface water treatment processes include: (1) coagulation, (2) flocculation, (3) solid-liquid separation (e.g., sedimentation, filtration), and (4) disinfection with free chlorine. A 2014 North Carolina State University study of two drinking water treatment plants in the Cape Fear River watershed showed no removal of 1,4-dioxane.[5] For the Pittsboro plant, the finished drinking water contained 1,4-dioxane at levels 25 times the one-in-a-million risk level. For the Fayetteville plant, the finished drinking water contained 1,4-dioxane at levels 7 times the one-in-a-million risk level.

30. 1,4-Dioxane is also not well removed by many advanced treatment technologies, including activated carbon adsorption, air stripping, and most oxidation processes (including treatment by chlorine).

31. There are some advanced treatment options that can remove 1,4-dioxane from drinking water, such as ultraviolet light in combination with hydrogen peroxide or ozone. Data from our laboratory suggest that implementing

[5] *Id.*

such treatment required to lower 1,4-dioxane to safe levels in the Cape Fear River basin would be very costly.

32. Advanced treatment with ozone at a drinking water treatment plant in Wilmington, North Carolina was insufficient to lower the 1,4-dioxane concentration to the one-in-a-million risk level (0.35 μg/L). Ozone treatment may also create undesirable by-products in some water systems.

33. Reverse osmosis membranes may partially remove 1,4-dioxane, but may need to be coupled with other advanced treatment to achieve safe levels. Such treatment is very costly compared to conventional treatment.

How many North Carolinians drink water with elevated 1,4-dioxane levels?

34. Surface water in the Cape Fear River basin serves as a source of drinking water for approximately 1.5 million North Carolinians. Of the approximately 1.5 million residents, about 1 million receive drinking water with 1,4-dioxane concentrations above the one-in-a-million risk level.

What can affected residents do?

35. To date, no point-of-use (pitcher, faucet, under-sink, refrigerator) or point-of-entry (whole house) filters have been certified for 1,4-dioxane removal.

36. Pitcher and refrigerator filters were evaluated at North Carolina State University for their 1,4-dioxane removal effectiveness. Overall, commercially available point-of-use treatment devices exhibited limited effectiveness for 1,4-

dioxane removal from tap water, especially under variable 1,4-dioxane concentrations.[6]

37. In a field study involving six under-sink reverse osmosis filters, 1,4-dioxane was removed to concentrations below the one-in-a million risk level (0.35 μg/L) in communities served by Cape Fear River water in North Carolina. These filters are prohibitively costly for some homeowners.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Detlef Knappe, Ph.D.

4/11/18
Date

[6] *Id.*

Exhibit A

to the Declaration of Detlef Knappe, Ph.D.
in Support of Petitioners' Opening Brief

Curriculum Vitae

Name: Detlef R. U. Knappe **April 3, 2018**

I. Brief Resume

Name Detlef Knappe

1. Education background:

Ph.D., Environmental Engineering in Civil Engineering, 1996, University of Illinois, Urbana, IL.
M.S., Environmental Engineering in Civil Engineering, 1991, University of Illinois, Urbana, IL.
B.S., Civil Engineering, 1989, University of Illinois, Urbana, IL. Highest honors.

2. Professional experience:

Professor, 2008-present, NC State University, Department of Civil, Construction, and Environmental Engineering
Visiting Scholar, Spring 2013, US Environmental Protection Agency, Research Triangle Park, NC
Associate Professor, 2002-2008, NC State University, Department of Civil, Construction, and Environmental Engineering
Visiting Scholar, Fall 2005, Swiss Federal Institute of Technology (ETH), EAWAG, Switzerland
Assistant Professor, 1996-2002, NC State University, Department of Civil Engineering
Graduate Research and Teaching Assistant, 1991-1995, University of Illinois, Environmental Engineering in Civil Engineering, IL
University Fellow and Graduate Research Assistant, 1989-1991, University of Illinois, Environmental Engineering in Civil Engineering, IL

3. Scholarly and creative activities:

Refereed Activity	*Number*
Book Chapters	2
Journal Articles	48 (+1 submitted)
Research Reports	14

Non-Refereed Activity	*Number*
Conference Papers	60
Conference Abstracts	87
Invited Presentations	56

4. Membership in professional organizations

American Chemical Society, 1999-present
American Geophysical Union, 1998-2008

American Society of Civil Engineers, 1987-present
American Water Works Association, 1989-present
Association of Environmental Engineering and Science Professors, 1996-present
Engineers Without Borders, 2008-present
International Water Association, 1996-present

5. Scholarly and professional honors

Best paper award for our 2016 publication in ES&T Letters, 2017
NSF Science Nation video of our 1,4-dioxane research in the Cape Fear River watershed, 2015
Thesis advisor for the 1st place winner in the American Water Works Association Academic Achievement Award competition for the best Master's Thesis, 2013
Outstanding Teacher Award (NCSU College of Engineering), 2011
Advisor for the winner of the Best Student Paper Award at the American Water Works Association Water Quality Technology Conference, 2007
Thesis advisor for the 2nd place winner in the American Water Works Association Academic Achievement Award competition for the best Master's Thesis, 2007
AWWA Water Science & Research Division Best Poster Award, 2006
Bill Horn Kimley-Horn Faculty Award, NC State University, 2003
AWWA Water Science & Research Division Best Paper Award, 2001
Young Civil Engineer Achievement Award, University of Illinois, 2000
Thesis Advisor for the 2nd place winner in the AEESP/Montgomery Watson Master's Thesis Award Competition, 1999
University of Illinois Fellowship, 1989-1991
Bronze Tablet Recipient, University of Illinois, 1989
Ira O. Baker Prize, Department of Civil Engineering, University of Illinois, 1989
A. Epstein Award, Department of Civil Engineering, University of Illinois, 1989
Chi Epsilon, 1988-present
Tau Beta Pi, 1988-present

6. Professional service on campus

Department RPT Committee Member 2014-2016, Chair 2016-present
Global WaSH Cluster Hire Search Committee, 2015-present
Department ABET Assessment Committee for Laboratory Outcomes Member, 2001-2015, Chair 2015-present
Department EB V/Oval Lab Committee Member 2008-2010, 2016-present
Department Equipment and Facilities Committee Member 1998-2002, 2013-2016, Chair 2002-2012
WREE Group Coordinator, Fall 2011-Spring 2012
Department Head Search Committee Member, 2004 and 2009-2010
Department Awards Committee Member, 2007-2011
Department Sustainability Task Force Member, 2008-2010
WRRI Director Search Committee Co-Chair, 2008-2009
Department Compact Planning Committee Member, Spring 2007
Water Resources and Environ. Engrg. Seminar Series Teleconference Coordinator, 1998-2004
Department Faculty Search Committee Member, 1997, 1999, 2007

Department Open House Committee Chair, 1998-1999
Department Open House Committee Member, 1997-1998
Department Flower Fund Chair, 1996-1997
College Welcome Presenter, 2001
Department Representative for Summer Orientation, 1998-2000
Technical Advisory Committee Member for Engineers without Borders (NCSU Student Chapter), 2006-present

7. Professional service off campus

Committee Appointments
NC Science Advisory Board, Member, 2017-present
EPA Science Advisory Board, Member, Drinking Water Committee, 2016-present
Trustee, AWWA Water Science and Research Division, 2016-present
AEESP Lectures Committee Member, 2008-2016, Subcommittee Chair for lecturer selection at the AWWA Annual Conference, 2014-2016
AWWA Publications Award Committee Member, 2013-present
AWWA Activated Carbon Standards Committee Member, 2003-present
AWWA Regeneration Standards Subcommittee Chair, 2005-2007
AWWA Organic Contaminants Research Committee Member, 2000-2005, 2007-present
AWWA Carcinogenic Volatile Organic Compounds Working Group, 2011-2014
AWWA Particulate Contaminants Research Committee Member, 2001-2005

Journal Editorship
Topic Editor, Drinking Water Engineering and Science (Open Access Journal), 2011-present
Associate Editor, Water Science and Technology, 2009-2013

Conference Organization
Organizer for special topic session "GenX and Emerging Contaminants of Concern," NC Water Resources Research Institute Annual Conference, 2018
Organizer for special topic session "Effects of Perfluoroalkyl Substances on Drinking Water Quality and Treatment," AWWA Annual Conference, 2017
Organizer for special topic session "Water Treatment with Superfine Powdered Activated Carbon for Organics Removal," AWWA Water Quality Technology Conference, 2015
Organizer for special topic session "Activated Carbon Adsorption," AWWA Annual Conf., 2013
Co-organizer of ACS Symposium "Advances in Adsorption Processes," 2007-2008

Review
Peer reviewer for journals, conference abstracts, and research proposals (NSF, NIH, EPA, Water RF, EREF, WRRI, Research Council of Norway, U.S.-Israel Binational Science Foundation), 1991-present
Project Advisory Committee Member for WateReuse Foundation project, 2015-present
Project Advisory Committee Member for AwwaRF/Water RF research projects, 1997-2011

II. TEACHING AND MENTORING OF UNDERGRADUATE AND GRADUATE STUDENTS

A. Teaching Effectiveness

Courses Taught, Enrollment, and Student Evaluations for the Past Three Years

Semester	Course Code	Enrollment	Student Evaluations*, §
Spring 2015	CE 771	12	4.8 (4.4)
Fall 2015	CE 378	28	4.7 (4.1)
	CE 574	16 8‡	4.6 (4.5) 5.0 (4.5) ‡
Spring 2016	CE 771	6	4.3 (4.5)
Fall 2016	CE 378	30	4.4 (4.1) – partially taught by Amie McElroy, I served as her teaching mentor
	CE 574	15	4.8 (4.5)
Spring 2017	CE 771	10	4.8 (4.6)
Fall 2017	CE 378	30	4.5 (4.0)
	CE 574	19 3‡	4.1 (4.5) not evaluated
Spring 2018	CE 771	6	ongoing

* Evaluation is the average response to "Overall, the instructor was an effective teacher" with a choice of 1 through 5. A response of 5 represents "strongly agree."
§ Departmental average is shown in parentheses.
‡ Engineering Online section

Summary of Peer Evaluations of Teaching

Dates: 10/17/17, 10/19/17, and 10/22/17
Faculty Member: Detlef Knappe
Peer Reviewers: Joel Ducoste and Sankar Arumugam
Course No. and Name: CE 378 – Environmental Chemistry and Microbiology

Evaluation:

"Very well" and "Adequately" were the only boxes that were checked on the Class Observation and Course Materials Checklists (apart from "Not applicable"). *What worked well in the class*: "Good pace." "Good discussion of how to organize oral presentation." "I attended a laboratory session. The instructor started off the class reminding students of today's assignment, then helped them get started on the required measurements. The lab was well organized and appeared to be appropriately stocked with the required supplies and equipment. All students arrived promptly and were focused on their work. Everyone appeared to understand what was going on." "Attention was given to each lab group." "Good preparation for oral presentations. Good presentation, illustrations of what is good and bad was helpful. Clear review of quiz solution." *What could have been improved*: "Rework slides from others (remove big blackouts) to get students more involved in discussion." "The

instructor and several students were not initially wearing safety glasses." "Consider asking student reading newspaper to not attend class as it may set tone for others." "Perhaps write out definition of accuracy and precision and then illustrate by example." "Ask students to critique slides." Comments on course materials: " Course materials are clear and well organized. Lab experiments are clear and easy to follow. Course covers basic environmental laboratory techniques that will be useful for those that go on to do laboratory research." "Clear course description and expectations." "Well organized handouts."

B. Instructional Development

Presented a class on critiquing research papers in the CE610 Research Methods class led by Dr. Ranjithan, Fall 2015, Spring 2016, Fall 2016.

Participated in discussions that led to a new Sustainable Engineering Design course, an interdisciplinary course between CCEE and Architecture. First offered in Spring 2012. Lead: Dr. Ranjithan in CCEE and Dr. Hill in Architecture. Provide lecture on water conservation each year.

Developed course content for CE 378 (Environmental Chemistry and Microbiology). Emphasizes fundamental concepts of chemistry and microbiology as they apply to (1) characterizing water and air quality and (2) finding engineering solutions to improve water and air quality. The course integrates theory and hands-on laboratory experiments. First offered Fall 2010.

Co-developed (with Dr. Joel Ducoste) course content for CE 373, a new introductory Environmental Engineering course (Spring 2002). I am continuing to develop lecture, homework, and project materials for CE 373 to enhance the sustainable engineering content for this course. For example, students are completing group projects related to green building design and construction practices. During the summer of 2009, Joe DeCarolis, Francis de los Reyes, Morton Barlaz and I re-designed the content of CE 373; in particular, concepts of engineering for sustainability were introduced.

Revised course content for CE 374, a junior-level environmental engineering laboratory course that introduces students to analytical techniques for the assessment of water and air quality. Both through Education and Technology Fee funds and matching funds from the College of Engineering, equipment was obtained that (1) introduces students to modern analytical techniques employed in environmental engineering practice and (2) strengthens the process engineering component of this course. Using the new equipment, experiments were developed that introduced students to common unit operations in water and wastewater treatment through hands-on experiences. Formal laboratory report requirements were designed to improve students' technical writing skills, and an oral presentation component was added in the Fall 2003 semester to give students an opportunity to present experimental results in verbal form using appropriate visual aids.

Modified notes for and taught a CE 381 laboratory session on viscosimetry on a semesterly basis (Spring 1997 – Spring 1999).

Completely revised course material for CE 484, a senior-level undergraduate course that introduces students to the design of unit operations for the treatment of water and wastewater. Design concepts for both physicochemical and biological treatment processes are presented and supplemented by field trips to local water and wastewater treatment plants. In the Fall 2000 semester, I introduced a technical writing and presentation assignment that gave student groups the opportunity to research a current topic in water and wastewater treatment (e.g. algal toxins, endocrine disruptors). In their course evaluation forms, students commented nearly unanimously that they enjoyed the assignment despite nearly equally unanimous comments that the assignment represented a substantial time-commitment. By requiring student groups to complete project milestones throughout the semester, they completed this open-ended assignment effectively and with enthusiasm. I was also pleasantly surprised by the quality of the students' final papers and presentations.

Participated in an *ad-hoc* committee to revise CE 574. The course action form and syllabus were changed to expand the environmental chemistry component of this course. Over the course of the Fall 2012 and Fall 2013 semesters, I updated course content and adopted a new textbook.

Completely revised course material for CE 672 (last offered in Spring 1998, currently not offered), an advanced graduate level course that focuses on the application of mass transfer concepts for the treatment of water and waste. Covered topics include activated carbon adsorption, ion exchange, gas transfer, and membrane treatment processes.

Completely revised course material for CE 771 (formerly CE 571), a graduate level course that focuses on the application of fundamental physicochemical principles to the design of common unit processes used in the treatment of water and waste. Covered topics include sedimentation, coagulation/flocculation, filtration, oxidation/reduction, disinfection, softening, adsorption, and membrane treatment. Offered CE 771 (formerly CE 571) through the Engineering Online program to students as far away as Washington State and Qatar.

Co-developed course material for CE 796C (Environmental Behavior of Organic Contaminants), an advanced graduate level course, in which students apply principles of environmental organic chemistry to predict the partitioning of contaminants among environmental media and to model chemical and biological transformation processes. Initial offering: Spring 07.

Coordinated effort to organize graduate course offerings in the process engineering area (Spring 2003). Course action forms for CE 571, CE 574, CE 771, and CE 774 were updated, and CE 573 was added.

Attended the College of Engineering Teaching Effectiveness Workshop conducted by Richard Felder and Rebecca Brent, McKimmon Center, NCSU, August 12-14, 1996. Began to enhance my courses by (1) incorporating more group activities, (2) addressing different learning styles, and (3) developing more problems that address higher level thinking.

C. Mentoring Activities

Undergraduate Academic Advising

I continue to serve as an academic advisor to approximately 10-20 undergraduate students in each academic year. Also mentored Parks Scholars.

Direction of Undergraduate Research (in chronological order)

Student	Program	Period
Tiffany Tang	BS (NCSU)	F 2017 – present
Julia O'Brian[*]	BS (NCSU)	Su 2017
Asma Idries	BS (NCSU) – co-advised with D. Call	Mar. – May 2017
Rachel Scroggins	BS (NCSU) – co-advised with D. Call	Mar. – May 2017
Nancy Lee McLean[*]	BS (NCSU)	Sp 2017 – present
John Merrill[*,‡]	BS (NCSU)	Sp 2015 – present
Ally Patrick[*]	BS (NCSU)	Su 2014
Sara Troutman[*,☺]	BS (NCSU) – co-advised with Ranjithan	F 2013 – Sp 2015
Caroline LaFave	BS (NCSU)	Sp 2014
Rodniqua Minor[*,☺]	BS (NCSU)	Sp 2013 – Sp 2014
Justin Davenport[*,☺]	BS (NCSU)	Sp 2013 – Sp 2014
Dustin Rhodes[*]	BS (NCSU)	Sp/Su 2012
Benjamin Lord[‡]	BS (NCSU)	Sp 2012
Katie Dorety[*]	BS (NCSU)	Sp 2011
Evan Ged[*,☺]	BS (NCSU)	F 2010/Sp 2011
Ross Varin[*,☺,Δ]	BS (NCSU) – co-advised with de los Reyes	F 2010/Sp 2011
Ruth Small[*,☺]	BS (NCSU)	Sp 2010
Susan Dunn[*,☺,§]	BS (NCSU)	F 2009
Leigh-Ann Bender[*,☺]	BS (NCSU)	Sp/Su 2010
Maggie Hennessy[*,☺]	BS (NCSU)	Sp/Su 2009
Oksana Popovski[*,#,☺]	BS (NCSU)	Sp/Su 2009
Mary Waligora[*,‡,☺]	BS (NCSU)	Sp 2008 - Sp 2010
Martin Srb[*]	IAESTE[**]	Su 2007
Catherine M. Hoffman[*]	REU (NSF)	Su 2006
Laura E. Chambers[*,#]	REU (NSF)	Su/F 2003
Laurissa E. Hoyle[*,#,§]	REU (NSF)	F 2002/Sp 2003
Maria Pinzón[+]	Summer Research Experience (NSF)[&]	Su 2002
Travis B. Wagner[*,§]	BS (NCSU)	Sp/Su 2001
Anette Olsson[+]	BS (University of Lund, Sweden)	Sp 2001
Jon C. Williams[+,§]	BS (NCSU)	Su 2000/2001
Jun-Sang Lee[*]	BS (ChungBuk National Univ., S. Korea)	Su/Fall 1999
Jin-Man Kim[*]	BS (ChungBuk National Univ., S. Korea)	Su/F 1999
Patricia A. Quinlivan[*,§]	BS (NCSU)	Sp/Su 1999
Laurel E. Wright[*,§]	BS (NCSU)	Sp/Su 1999
Adrienne M. Sheats	Ravenscroft High School Intern	May 1999
Alper O. Savas[+,§]	BS (METU, Turkey)	Su 1998

Jenny Parmar[*, §]	BS (NCSU)	Sp 1998
Heather A. Marek[*]	REU (NSF)	Su 1997
Alper O. Savas[*, §]	BS (METU, Turkey)	Su 1997

[*] Students worked on externally funded projects
[@] Cost-shared with COE/CCEE undergraduate research funds
[Δ] Co-advised with F.L. de los Reyes
[#] Co-advised with M.A. Barlaz
[‡] Student was recipient of an NCSU undergraduate research award
[**] International Association for the Exchange of Students for Technical Experience
[§] Students subsequently enrolled in the graduate Civil Engineering program at NCSU
[+] Students worked on unfunded projects to collect screening data for research proposals
[&] The North Carolina Minority Graduate Education Program is funded by NSF and includes the "Intensive Research and Training Program," which has two primary components: the "Academic Year Research Experience" (ARE) and the "Summer Research Experience" (SRE).

Graduate Committees (Chair/co-chair)

Student	**Degree**	**Committee Role**	**Graduation Date**
S. Park	PhD	co-chair	anticipated Sp 22
C. Zhang	PhD	chair	anticipated Sp 20
A. McElroy[^]	PhD	chair	anticipated Sp 18
Z. Hopkins	PhD	chair	anticipated Sp 17
B. Yuncu	PhD	chair	Fa 10
J. M. Saquing	PhD	co-chair	Fa 09
A. A. Rossner	PhD	chair	Fa 08
A. C. Baeza[*, +]	PhD	chair	Fa 08
C. Chun	PhD	co-chair	Su 07
Y. Chen	PhD	co-chair	Su 03
L. Li	PhD	co-chair[§]	Su 02
B. Wu	PhD	co-chair[§]	Su 02

[^] GAANN Fellow
[*] NSF Graduate Research Fellow
[+] NWRI Fellow
[§] I served as primary research advisor, but I was not able to chair PhD committees because of my associate membership in the Graduate Faculty

M. Fitzstevens	MS	co-chair	anticipated Su 18
O. Hounwanou	MS	chair	anticipated Sp 18
C. Maness	MS	chair	Sp 17
C. Lopez Velandia	MS	chair	Su 16
J. Moreno Barbosa	MS	chair	Su 16
R. S. Ingham	MS	chair	Su 14
A. C. Greune	MS	chair	Su 14
V. U. Edeback	MS	chair	Su 14
E. C. Arevalo	MS	chair	Sp 14
A. M. Reinert	MS	chair	Sp 13
M. E. Fotta	MS	chair	Su 12
L. M. Dudley	MS	chair	Sp 12

S. E. Dunn*, +	MS	chair	Fa 11
A. Mastropole	MS	chair	Su 11
Q. Deng	MS	chair	Su 10
A. Viswakumar	MS	chair	Sp 10
V. Mandapaka	MS	co-chair	Fa.08
I. A. Mezzari+	MS	chair	Sp.06
L. A. Mitchell	MS	chair	Sp.05
A. A. Rossner	MS	chair	Su.04
T. B. Wagner	MS	chair	Su.03
P. A. Quinlivan*	MS	chair	Su.01
C. M. Taylor	MS	chair	Sp.00
S. R. Gandy	MS	chair	Sp.00
N. Rastogi	MS	chair	Fa.99
R. C. Belk	MS	chair	Sp.99
D. S. Briley+	MS	chair	Fa.98
A. H. Rike	MS	chair	Sp.98

* NSF Graduate Research Fellow
+ Thesis Award Winner (AWWA, AEESP)

Graduate Committees (Member)

Student	**Program**	**Graduation Status**
A. Hess	PhD (Process Eng. – ETH Zurich)	ongoing
Q. Cheng	PhD (CE)	ongoing
M. Bentley	PhD (CE – U. Colorado, Boulder)	ongoing
A. Beciragic	PhD (ESE – UNC-CH)	ongoing
H. Chmielewski	PhD (OR)	ongoing
B. Hess	PhD (BAE)	ongoing
K. Grzebyk	PhD (ESE – UNC-CH)	ongoing
J.M. Tillotson	PhD (CE)	ongoing
S. Safavizadeh	PhD (CE)	completed
E. Gillispie	PhD (SSC)	completed
K. Shimabuku	PhD (CE – U. Colorado, Boulder)	completed
E. Bailey	PhD (ESE – UNC-CH)	completed
J. Kearns	PhD (CE – U. Colorado, Boulder)	completed
J. Won	PhD (CE)	completed
J.R. Lang	PhD (CE)	completed
A.D. Lindsay	PhD (NE)	completed
X. Wang	PhD (CE)	completed
F. de la Cruz	PhD (CE)	completed
D. Kempisty	PhD (CE – U. Colorado, Boulder)	completed
A. Kennedy	PhD (CE – U. Colorado, Boulder)	completed
A. Sobremisana	PhD (CE)	completed
X. He	PhD (CE)	completed
J. Oh	PhD (CE)	completed
Q. Chow	PhD (CE – U. Illinois, Urbana)	completed

C. Corwin	PhD (CE – U. Colorado, Boulder)	completed
S. M. Alpert	PhD (CE)	completed
S. Velten	PhD (CE – ETH Zurich)	completed
T. M. Kunberger	PhD (CE)	completed
C. Mota	PhD (CE)	completed
I. Lou	PhD (CE)	completed
M. Badruzzaman	PhD (CE – Ariz. State)	completed
L. Schideman	PhD (CE – U. Illinois, Urbana)	completed
D. Liu	PhD (CE)	completed
Y. Liu	PhD (CE)	completed
E. Solano	PhD (CE)	completed
K. Clay	MS (MEAS)	completed
J. Babuin-Nickels	MS (MEAS)	completed
A. Berglund	MS (CE)	completed
J. B. Wahlen	MS (CE)	completed
S. R. Farling	MS (CE)	completed
F. J. Hurley	MS (CE)	completed
K. Fogle	MS (CE)	completed
B. Karami	MS (CE)	completed
J. Lang	MS (CE)	completed
L. Bao	MS (CE)	completed
J. P. Kaplan	MS (ESE – UNC-CH)	completed
M. Vazquez	MS (CE)	completed
E. Gallimore	MS (CE)	completed
C. Bowker	MS (CE)	completed
R. Prevost	MS (CE)	completed
Y. Bi	MS (Soil Science)	completed
L. Wellborn	MS (CE)	completed
K. Jang	MS (CE)	completed
J. H. Martin II	MS (BAE)	completed
V. L. Nguyen	MS (CE)	completed
A. Sadri	MS (CE)	completed
G. Gulez	MS (CE)	completed
J. C. Williams	MS (CE)	completed
C. Long	MS (CE)	completed
N. Bartholomew	MS (Soil Science)	completed
A. C. Baeza	MS (CE)	completed
J. Liao	MS (CE)	completed
D. C. Hopkins	MS (CE)	completed
J. C. Ihnatolya	MS (CE)	completed
V. A. Ortiz	MS (CE)	completed
K. M. Aragona	MS (CE)	completed
R. J. Fairweather	MS (CE)	completed
D. M. Giachini	MS (CE)	completed
D. K. Peplinski	MS (CE)	completed
M. T. Pelton	MS (CE)	completed

J. K. Rash	MS (CE)	completed
M. R. Sanchez	MS (CE)	completed
J. B. Stillman	MS (CE)	completed
M. B. Vergonio	MS (CE)	completed

MCE Project Advisor

I. A. Mezzari	MCE	Sp.09
A. O. Savas	MCE	Sp.03
J. M. Chambers	MCE	Fa.99
G. C. Rucker	MCE	Sp.97

External PhD Thesis Reviewer

Lionel Ho	University of South Australia	Fall 2004

Graduate Academic Advising

In addition to the MS and PhD students, for whom I serve as research and academic advisor, I continue to serve as an academic advisor to approximately 2 MCE students (courses-only program) and 2 MCEZ students (Engineering Online program) in each academic year.

Hosting of Visiting Scholars

Zihong Fan, Lecturer, Chongqing Technology and Business University, March 2017 – August 2018. Research Topic: Cyclodextrin-enhanced adsorption of disinfection by-product precursors.

Mary Jo Weiss-Errico, PhD Student, Florida International University, January-February 2018. Research Topic: Functionalization of graphene oxide for targeted PFAS removal.

Geert Aschermann, PhD Student, TU Berlin, November 2017 – February 2018. Research Topic: Factors controlling PFAS desorption from activated carbon.

Josh Kearns, PhD Student, CU-Boulder; Director, Aqueous Solutions (A non-profit organization with the mission to enable households and communities to ensure the safety of their drinking water in a sustainable and self-reliant manner.) April – October 2008, Jan. 2013-May 2017. Research Topic: Effect of char preparation on adsorptive pesticide removal from drinking water.

Guangqian Wu, PhD Student and Lecturer, Nanjing Forestry University, June 2014-March 2015. Research Topic: Adsorption of 1,4-dioxane on graphene and carbonaceous resins.

Dr. Zhang Hua, Assistant Professor from Tongji University, August 2011 – August 2012. Research Topic: Organic contaminant sorption to municipal solid waste constituents. Co-directed by Drs. Barlaz and Knappe

Dr. Qingdong Qin, post-doctoral researcher at Southeast University in Nanjing, China. Dr. Qin spent 6 months at NCSU to conduct research on activated carbon adsorption processes. April – September 2011.

Dr. Koichi Ohno, Assistant Professor, Laboratory of Environmental Risk Engineering, Hokkaido University, Sapporo, Japan. Dr. Ohno spent a 10-month sabbatical at NCSU and conducted research on activated carbon adsorption processes. March 2009 – January 2010.

Silvana Velten, PhD Candidate, EAWAG (Swiss Federal Institute of Aquatic Science and Technology), February – August 2007. Research Topic: The effects of natural organic matter preloading on physicochemical properties of granular activated carbon and polar organic contaminant removal efficiency.

Dr. Hang-Bae Jun, Assistant Professor, ChungBuk National University, South Korea, January 1999 – January 2000. Research Topic: Optimization of Coagulation Conditions for the Removal of Algae from Drinking Water. Funding Agency: Korean Science and Engineering Foundation. The collaboration resulted in the publication of one peer-reviewed paper. Dr. Jun was promoted to Associate Professor at ChungBuk University after his stay at NC State University.

Advising of Post-Doctoral Research Associates

Dr. Nadine Kotlarz, August 2017 – present. Research Topics: Human biomarkers for emerging PFASs; water treatment options for emerging PFASs

Dr. Yue Zhi, August 2017 – present. Research Topic: Nanoparticles for the recovery of phosphate from waste

Dr. Mei Sun, April 2013 – December 2015. Research Topics: Adsorptive removal of fluorinated alternatives from drinking water, biological sulfide potential. Co-directed by Drs. Barlaz and Knappe. Current position: Assistant Professor, University of North Carolina at Charlotte.

Dr. Jovita Saquing, August 2009 – August 2010. Research Topic: Contaminant Fate and Transport in Municipal Solid Waste. Co-directed by Drs. Barlaz and Knappe. Current position: Post-doctoral research associate, University of Delaware.

Dr. Erik Rosenfeldt, August 2006 – July 2007. Research Topic: New Techniques to Quantify Assimilable Organic Carbon Concentrations and Microbial Regrowth in Drinking Water Distribution Systems. Current position: Director of Applied Research, Hazen and Sawyer.

Dr. Shannon Bartelt-Hunt, July 2004 – December 2005. Research Topic: Assessment of the Behavior of Chemical and Biological Contaminants in Landfills. Co-directed by Drs. Barlaz and Knappe. Current position; Professor, University of Nebraska at Omaha.

Advising of Student Groups

I have served and continue to serve as research group advisor and technical advisory committee member for the NCSU Student Chapter of Engineers Without Borders. Fall 2006 – present.

Master's and Doctoral Theses Directed and Being Directed

PhD Theses

1. Bingyan Wu. 2002. Factors controlling alkylbenzene sorption and desorption in municipal solid waste. Ph.D. Thesis (co-chair with Dr. M.A. Barlaz).*

2. Lei Li. 2002. Effects of activated carbon surface chemistry and pore structure on the adsorption of trace organic contaminants from aqueous solution. Ph.D. Thesis (co-chair with Dr. M.A. Barlaz).*

3. Ye Chen. 2003. Effects of Aging on the Bioavailability of Toluene Sorbed to Municipal Solid Waste Components. Ph.D. Thesis (co-directed with Dr. M.A. Barlaz)

4. Chen Chun. 2007. Quantifying Anti-Strip Additive in Asphalt Binders and Mixes. Ph.D. Thesis (co-directed with Dr. A.A. Tayebali).

5. A. Carolina Baeza. 2008. Removal of pharmaceutical and endocrine disrupting chemicals by sequential photochemical and biological oxidation processes. Ph.D. Thesis (Carolina Baeza's work was supported by a NSF Graduate Research Fellowship and a NWRI fellowship).

6. Alfred A. Rossner. 2008. Removal of polar and emerging organic contaminants by alternative adsorbents. Ph.D. Thesis.

7. Jovita Saquing. 2009. Sorption Behavior and Persistence of Organic Contaminants in Landfills. Ph.D. Thesis (co-directed with Dr. M.A. Barlaz).

8. Bilgen Yuncu. 2010. Removal of 2-Methylisoborneol and Geosmin by High-Silica Zeolites and Powdered Activated Carbon in the Absence and Presence of Ozone. Ph.D. Thesis.

9. Zachary Hopkins. Expected 2017. Advanced oxidation and reduction processes for the control of emerging ether contaminants in drinking water (tentative title). Ph.D. Thesis.

10. Amie McElroy. Expected 2018. Degradation of 1,4-dioxane by monooxygenase-producing microorganisms (tentative title). Ph.D. Thesis.

11. Chuhui Zhang. Expected 2020. Total oxidizable precursor assay for the characterization of environmental samples contaminated with perfluoroalkyl ether acids (tentative title). PhD Thesis.

12. Sol Park. Expected 2022. Electrically assisted adsorption of short-chain perfluoroalkyl acids.

[*] I served as primary research advisor, but I was not able to chair PhD committees because of my associate membership in the Graduate Faculty

MS Theses

1. Andrew H. Rike. 1998. The impacts of algae and extracellular organic matter on coagulant demand and trihalomethane and dichloroacetonitrile formation potential. M.S. Thesis.

2. David S. Briley. 1999. Optimization of coagulation conditions for the removal of algae in conventional water treatment. M.S. Thesis. (David Briley's thesis received 2nd place in the AEESP/Montgomery Watson Master's Thesis Award Competition).

3. Robert C. Belk. 1999. On-line monitoring tools for detecting algae in natural waters. M.S. Thesis.

4. Neerja Rastogi. 1999. Effects of Potassium Permanganate Preoxidation on Algae Removal and Finished Water Quality. M.S. Thesis.

5. Steven R. Gandy. 2000. Effectiveness of Dissolved Air Flotation and Microsand-Enhanced Flocculation for the Removal of Algae from Drinking Water. M.S. Thesis.

6. Caleb M. Taylor. 2000. Relationships between Physical and Chemical Characteristics of Municipal Solid Waste and its Sorptive Properties. M.S. Thesis. (co-directed with Dr. M.A. Barlaz)

7. Patricia A. Quinlivan. 2001. The Effects of Activated Carbon Surface Chemistry and Pore Structure on the Adsorption of Methyl Tertiary-Butyl Ether and Trichloroethene from Natural Water. M.S. Thesis. (Patricia Quinlivan's work was supported by a NSF Graduate Research Fellowship).

8. Travis B. Wagner. 2003. Factors controlling hydrophobic organic contaminant sorption to and desorption from municipal solid waste. M.S. Thesis. (co-directed with Dr. M.A. Barlaz)

9. Alfred A. Rossner. 2004. Adsorption of methyl tertiary-butyl ether on high-silica zeolites: effects of adsorbent characteristics and natural organic matter on adsorption isotherms. M.S. Thesis.

10. Lisa A. Mitchell. 2005. Factors controlling desorption rates of hydrophobic organic contaminants from municipal solid waste. M.S. Thesis.

11. Isabella A. Mezzari. 2006. Predicting the adsorption capacity of activated carbon for organic contaminants from fundamental adsorbent and adsorbate properties. M.S. Thesis. (Isabella Mezzari's thesis received 2nd place in the 2007 AWWA Academic Achievement Awards Master's Thesis Competition).

12. Venkata Mandapaka. 2008. Effect of prolonged heating on asphalt-aggregate bond strength. M.S. Thesis (co-directed with Dr. A.A. Tayebali).

13. Anjali Viswakumar. 2010. Development of a gas chromatography-tandem mass spectrometry method for the simultaneous analysis of 19 taste and odor compounds. M.S. Thesis.

14. Qianru Deng. 2010. Removal of biochemically active compounds by powdered activated carbon adsorption processes. M.S. Thesis.

15. Angela Mastropole. 2011. Evaluation of available scale-up approaches for the design of GAC contactors. M.S. Thesis.

16. Susan Dunn. 2011. Effect of powdered activated carbon base material and size on disinfection by-product precursor and trace organic pollutant removal. M.S. Thesis.

17. Leigh-Ann Dudley. 2012. Removal of perfluorinated compounds by powdered activated carbon, superfine powdered activated carbon, and anion exchange resins. M.S. Thesis.

18. Meredith Fotta. 2012. Effect of granular activated carbon type on adsorber performance and scale-up approaches for volatile organic compound removal. M.S. Thesis.

19. Allison Reinert. 2013. Granular activated carbon adsorption of micropollutants from surface water: Field-scale adsorber performance and scale-up of bench-scale data. M.S. Thesis.

20. Elisa Arevalo. 2014. Removal of Perfluorinated Compounds by Anion Exchange: Factors Affecting Resin Performance and Regeneration. M.S. Thesis.

21. Rachel Ingham. 2014. Henry's Law and Freundlich adsorption constants for carcinogenic volatile organic contaminants. M.S. Thesis.

22. Viking Edeback. 2014. Treatment Options for Disinfection Byproduct Control in Drinking Water Sources with Elevated Bromide Levels. M.S. Thesis.

23. Amber Greune. 2014. Bromide Occurrence in North Carolina and the Relationship between Bromide Concentration and Trihalomethane Formation. M.S. Thesis.

24. Jonathan Moreno Barbosa. 2016. Evaluation of Freundlich Adsorption Constants for VOCs at Regulatory Relevant Concentrations. M.S. Thesis.

25. Catalina Lopez Velandia. 2016. Occurrence of 1,4-dioxane in the Cape Fear River Watershed and Effectiveness of Point-Of-Use Treatment Options for 1,4-dioxane Control. M.S. Thesis.

26. Clark Maness. 2017. Control of Regulated and Unregulated Disinfection Byproducts by Granular Activated Carbon : Effects of Bromide, Iodide, and Pre-Chlorination. M.S. Thesis.

27. Obatayo Hounwanou. Effect of soil properties on turbidity control strategies for stormwater treatment (tentative title). M.S. Thesis. Expected August 2018.

III. SCHOLARSHIP IN THE REALMS OF FACULTY RESPONSIBILITY

A. Scholarly Accomplishments

Book Chapters

1. Summers, R.S.; D.R.U. Knappe; and V.L. Snoeyink. "Chapter 14 – Adsorption of Organic Compounds." In *Water Quality and Treatment*, 6th ed., J.K. Edzwald (Ed.), McGraw-Hill: New York, NY, 2011.

2. Knappe, D.R.U. "Chapter 9 - Surface Chemistry Effects in Activated Carbon Adsorption of Industrial Pollutants." In *Interface Science in Drinking Water Treatment – Theory and Applications*, Newcombe, G. and Dixon, D. (Eds.), Academic Press: Oxford, UK, 2006.

Refereed Journal Publications

1. Hopkins, Z.R., Sun, M., DeWitt, J.R., and Knappe, D.R.U. "Recently detected drinking water contaminants: GenX and other per- and polyfluoroalkyl ether acids." *Journal AWWA*, accepted (invited).

2. Hess, B.J.; P. Kolar, J.J. Classen, D. Knappe, and J.J. Cheng. "Evaluation of waste eggshells for adsorption of copper from water." *Transactions of the ASABE*, accepted.

3. Kennedy, A.M., Reinert, A.R., Knappe, D.R.U., and Summers, R.S. "Prediction of Full-Scale GAC Adsorption of Organic Micropollutants." *Environmental Engineering Science*, 34(7): 496-507, 2017.

4. Sun, M., Arevalo, E., Strynar, M.J., Lindstrom, A.B., Richardson, M., Kearns, B., Smith, C., Pickett, A., and Knappe, D.R.U. "Legacy and Emerging Perfluoroalkyl Substances Are Important Drinking Water Contaminants in the Cape Fear River Watershed of North Carolina." *Environmental Science and Technology Letters*, 3(12): 415-419, 2016.

5. Sun, M., Lopez-Velandia, C., Knappe, D.R.U. "Determination of 1,4-dioxane in the Cape Fear River watershed by heated purge-and-trap preconcentration and gas chromatography–mass spectrometry." *Environmental Science and Technology*, 50(5): 2246–2254, 2016.

6. Kearns, J.P.; Knappe, D.R.U.; and Summers, R.S. "Feasibility of using traditional kiln charcoals in low cost water treatment: The role of pyrolysis conditions on 2,4-D herbicide adsorption." *Environmental Engineering Science*, 32(11): 912-921, 2015.

7. Kearns, J.P.; Shimabuku, K.K.; Mahoney, R.B.; Knappe, D.R.U.; and Summers, R.S. "Meeting multiple water quality objectives through treatment using locally generated char: Improving organoleptic properties and removing synthetic organic contaminants and disinfection byproducts." *Journal of Water, Sanitation and Hygiene for Development*, 5(3): 359-372, 2015.

8. Kennedy, A.M.; Reinert, A.M.; Knappe, D.R.U.; Ferrer, I.; and Summers, R.S. "Full- and pilot-scale GAC adsorption of organic micropollutants." *Water Research*, 68: 238-248, 2015.

9. Lindsay, A.; Byrns, B.; King, W.; Andhvarapou, A.; Fields, J.; Knappe, D.; Fonteno, W.; and Shannon, S. "Fertilization of radishes, tomatoes, and marigolds using a large-volume atmospheric glow discharge." *Plasma Chemistry and Plasma Processing*, 34(6): 1271-1290, 2014.

10. Kearns, J.P.; Wellborn, L.S.; Summers, R.S.; and Knappe, D.R.U. "2,4-D adsorption to biochars: effect of preparation conditions on equilibrium adsorption capacity and comparison with literature data for activated carbons." *Water Research*, 62: 20-28, 2014.

11. Kearns, J.P.; Knappe, D.R.U.; and Summers, R.S. "Synthetic organic water contaminants in developing communities: An overlooked challenge addressed by adsorption with locally generated char." *Journal of Water, Sanitation and Hygiene for Development*, 4(3): 422-436, 2014.

12. Kovalova, L.; Knappe, D.R.U.; Lehnberg, K., Kazner, K., and Hollender, J. "Removal of highly polar micropollutants from wastewater by powdered activated carbon." *Environ. Sci. Poll. Res.*, 20(6): 3607-3615, 2013.

13. Chen, Y.; D.R.U. Knappe; and M.A. Barlaz. "The Effect of Aging on the Bioavailability of Toluene Sorbed to Municipal Solid Waste Components." *Chemosphere*, 90(2): 251-259, 2013.

14. Matsui, Y.; Yoshida, T.; Nakao, S.; Knappe, D.R.U.; and Matsushita, T. "Characteristics of Competitive Adsorption between 2-Methylisoborneol and Natural Organic Matter on Superfine and Conventionally Sized Powdered Activated Carbons." *Water Research*, 45(16): 4741-4749, 2012.

15. Saquing, J.M.; D.R.U. Knappe; and M.A. Barlaz. "Fate and Transport of Phenol in a Packed Bed Reactor Containing Simulated Solid Waste." *Waste Management*, 32(2): 327-334, 2012.

16. Baeza, A.C. and D.R.U. Knappe. "Transformation Kinetics of Biochemically Active Compounds in Low-Pressure UV Photolysis and UV/H_2O_2 Advanced Oxidation Processes." *Water Research*, 45(15): 4531-4543, 2011.

17. Velten, S.; D.R.U. Knappe; J. Traber; H.P. Kaiser; U. von Gunten; M. Boller; and S. Meylan. "Characterization of natural organic matter adsorption in granular activated carbon adsorbers." *Water Research*, 45(13): 3951-3959, 2011.

18. Saquing, J.M.; C.D. Saquing; D.R.U. Knappe; and M.A. Barlaz. "Impact of Plastics on Fate and Transport of Organic Contaminants in Landfills." *Environmental Science and Technology* 44(16): 6396-6402, 2010.

19. Alpert, S.M.; D.R.U. Knappe; and J.J. Ducoste. "Modeling the UV/hydrogen peroxide advanced oxidation process using computational fluid dynamics." *Water Research*, 44(6):

1797-1808, 2010.

20. Saquing, J.M.; L.A. Mitchell; Wu, B.; T.B. Wagner; D.R.U. Knappe; and M.A. Barlaz. "Factors controlling alkylbenzene and tetrachloroethene desorption from municipal solid waste components." *Environmental Science and Technology* 44(3): 1123-1129, 2010.

21. Rosenfeldt, E.J.; C. Baeza; and D.R.U. Knappe. "Application of a Flow Cytometry Method to Assess the Bacterial Quality of Drinking Water." *Journal AWWA*, 101(10): 60-70, 2009.

22. Rossner, A.; S.A. Snyder; and D.R.U. Knappe. "Removal of an emerging contaminant mixture by alternative adsorbents." *Water Research*, 43(15): 3787-3796, 2009.

23. Teuten, E.L.; J.M. Saquing; D.R.U. Knappe; M.A. Barlaz; S. Jonsson; A. Björn; S.J. Rowland; R.C. Thompson; T.S. Galloway; R. Yamashita; D. Ochi; Y. Watanuki; M.P. Zakaria; Y. Ogata; H. Hirai; S. Iwasa; K. Mizukawa; Y. Hagino; A. Imamura; M. Saha; and H. Takada. "Transport and release of chemicals from plastics to the environment and to wildlife." *Philosophical Transactions of The Royal Society B*, 364: 2027-2045, 2009.

24. Rossner, A. and D.R.U. Knappe. "MTBE adsorption kinetics on alternative adsorbents and packed bed adsorber performance." *Water Research*, 42(8/9): 2287-2299, 2008.

25. Bartelt-Hunt, S.L.; D.R.U. Knappe; and M.A. Barlaz. "A review of chemical warfare agent simulants for the study of environmental behavior." *Critical Reviews in Environmental Science and Technology* 38(2): 112-136, 2008.

26. Bartelt-Hunt, S.L.; M.A. Barlaz; D.R.U. Knappe; and P. Kjeldsen. "Fate of Chemical Warfare Agents and Toxic Industrial Chemicals in Landfills." *Environmental Science and Technology*, 40(13): 4219-4225, 2006.

27. Chun, C.; A.A. Tayebali; and D.R.U. Knappe. "A Procedure to Quantify Organic Antistrip Additive in Asphalt Binders and Mixes." *Journal of Testing and Evaluation*, 34(4): 1-6, 2006.

28. Chun, C.; A.A. Tayebali; and D.R.U. Knappe. "Quantitative Determination of and Effect of Prolonged Heating on Amine-Based Antistrip Additive Contents in Asphalt Binders and Mixes." *Journal of the Association of Asphalt Paving Technologists*, 75, 2006.

29. Li, L.; P.A. Quinlivan; and D.R.U. Knappe. "Predicting Adsorption Isotherms for Aqueous Organic Micropollutants from Activated Carbon and Pollutant Properties." *Environmental Science and Technology*, 39(9): 3393-3400, 2005.

30. Quinlivan, P.A.; L. Li; and D.R.U. Knappe. "Effects of Activated Carbon Characteristics on the Simultaneous Adsorption of Aqueous Organic Micropollutants and Natural Organic Matter." *Water Research*, 39(8): 1663-1673, 2005.

31. Knappe, D.R.U. and A.A. Rossner Campos. "Effectiveness of High-Silica Zeolites for the Adsorption of Methyl Tertiary-Butyl Ether from Natural Water." *Water Science and*

Technology – Water Supply, 5(5): 83-91, 2005.

32. Badruzzaman, M.; P.K. Westerhoff; and D.R.U. Knappe. "Intraparticle Diffusion and Adsorption of Arsenate onto Granular Ferric Hydroxide (GFH)." *Water Research* 38(18): 4002-4012, 2004.

33. Chen, L.; M.A. Nanny; D.R.U. Knappe; T.B. Wagner; and N. Ratasuk "Chemical Characterization and Sorption Capacity Measurements of Degraded Newsprint from a Landfill." *Environmental Science and Technology* 38(13): 3542-3550, 2004.

34. Chen, Y.; D.R.U. Knappe; and M.A. Barlaz. "The Effect of Cellulose/Hemicellulose and Lignin on the Bioavailability of Toluene Sorbed to Waste Paper." *Environmental Science and Technology* 38(13): 3731-3736, 2004.

35. Hepplewhite, C.; G. Newcombe; and D.R.U. Knappe. "NOM and MIB, who wins in the competition for activated carbon adsorption sites?" *Water Science and Technology* 49(9): 257-265, 2004.

36. Newcombe, G.; J. Morrison; C. Hepplewhite; and D.R.U. Knappe. "Simultaneous Adsorption of MIB and NOM onto Activated Carbon: II. Competitive Effects." *Carbon*, 40(12): 2147-2156, 2002.

37. Li, L.; P.A. Quinlivan; and D.R.U. Knappe. "Effects of Activated Carbon Surface Chemistry and Pore Structure on the Adsorption of Organic Contaminants from Aqueous Solution." *Carbon*, 40(12): 2085-2100, 2002.

38. Matsui, Y.; D.R.U. Knappe; and Takagi, R. "Pesticide Adsorption by Granular Activated Carbon Adsorbers – 1. Effect of Natural Organic Matter Preloading on Removal Rates and Model Simplification." *Environmental Science and Technology*, 36(15): 3426-3431, 2002.

39. Matsui, Y.; D.R.U. Knappe; K. Iwaki; and H. Ohira. "Pesticide Adsorption by Granular Activated Carbon Adsorbers – 2. Effects of Pesticide and Natural Organic Matter Characteristics on Pesticide Breakthrough Curves." *Environmental Science and Technology*, 36(15): 3432-3438, 2002.

40. Briley, D.S. and D.R.U. Knappe. "Optimizing Ferric Sulfate Coagulation of Algae with Streaming Current Measurements." *Journal AWWA* 94(2): 80-90, 2002.

41. Newcombe, G.; J. Morrison; C. Hepplewhite ; and D.R.U. Knappe. "In the (Adsorption) Competition between NOM and MIB, Who is the Winner and Why?" *Water Science and Technology – Water Supply*, 2(2): 59-67, 2002.

42. Wu, B.; C.M. Taylor; D.R.U. Knappe; M.A. Nanny; and M.A. Barlaz. "Factors Affecting Alkylbenzene Sorption to Municipal Solid Waste." *Environmental Science and Technology*, 35(22): 4569-4576, 2001.

43. Jun, H.B.; Y.J. Lee; B.D. Lee; and D.R.U. Knappe. "Effectiveness of Coagulants and Coagulant Aids for the Removal of Filter-Clogging *Synedra*." *Aqua* 50(3): 135-148, 2001.

44. Sanin, F.D.; D.R.U. Knappe; and M.A. Barlaz. "The Fate of Toluene, Acetone, and 1,2-Dichloroethane in a Laboratory-Scale Simulated Landfill." *Water Research* 34(12): 3063-3074, 2000.

45. Knappe, D.R.U.; V.L. Snoeyink; P.Roche; M.J. Prados; and M.M. Bourbigot. "Atrazine Removal by Preloaded GAC." *Journal AWWA* 91(10): 97-109, 1999. (This paper received the 2001 AWWA Water Science & Research Division Best Paper Award)

46. Knappe, D.R.U.; Y. Matsui; V.L. Snoeyink; P. Roche; M.J. Prados; and M.M. Bourbigot. "Predicting The Capacity Of Powdered Activated Carbon For Trace Organic Compounds In Natural Waters." *Environmental Science and Technology* 32(11): 1694-1699, 1998.

47. Knappe, D.R.U.; V.L. Snoeyink; P. Roche; M.J. Prados; and M.M. Bourbigot. "The Effect of Preloading on Rapid Small-Scale Column Test Predictions of Atrazine Removal by GAC Adsorbers." *Water Research* 31(11): 2899-2909, 1997.

48. Knappe, D.R.U.; V.L. Snoeyink; G. Dagois; and J.R. DeWolfe. "The Effect of Calcium on the Thermal Regeneration of Granular Activated Carbon." *Journal AWWA* 84(8): 73-80, 1992.

Submitted

49. Merle, M.; Knappe, D.R.U.; Pronk, W.; Vogler, B.; and von Gunten, U. "Assessing breakthrough of micropollutants in full-scale granular activated carbon adsorbers with rapid small-scale column tests and a novel pilot-scale sampling approach." *Water Research* (submitted March 12, 2018).

Peer-Reviewed Final Reports*

1. Stanford, B., D. Knappe, R.S. Summers, S.D. Richardson, and E.R.V. Dickenson. GAC Control of Regulated and Emerging DBPs of Health Concern. Water Research Foundation: Denver, Colorado, in review.

2. Cotton, C., D.R.U. Knappe, K. Linden, J. Brown, G. Upadhyaya, and P. Ponturo. Evaluation of cVOC Removal Efficiencies by Various Technologies. Water Research Foundation: Denver, Colorado, in review.

3. Knappe, D.R.U., R.S. Ingham, J. Moreno Barbosa, S. Troutman, D. Kempisty, T. Daugherty, and R.S. Summers. Henry's Law and Freundlich adsorption constants for carcinogenic volatile organic contaminants. Water Research Foundation: Denver, Colorado, 2017.

4. Chowdhury, Z., K.L. Porter, J. Collins, C. Francis, S. Sriboonlue, D. Cornwell, R. Brown, and D.R. U. Knappe. Survey of Existing VOC Treatment Installations. Water Research Foundation: Denver, Colorado, 2016.

5. R.S. Summers, D. Kempisty, T. Daugherty, and D. Knappe. Removal of volatile organic contaminants (VOCs) from drinking water via granular activated carbon treatment. Water Research Foundation: Denver, Colorado, 2015.

6. Dudley, L.A., E.C. Arevalo, and D.R.U. Knappe. Removal of perfluoroalkyl substances by powdered activated carbon adsorption and anion exchange. Water Research Foundation: Denver, Colorado, 2015.

7. Summers, R.S., A.M. Kennedy, D.RU. Knappe, A.M. Reinert, M.E. Fotta, A.J. Mastropole, C.J. Corwin, and J. Roccaro. Evaluation of Available Scale-up Approaches for the Design of GAC Contactors. Water Research Foundation: Denver, Colorado, 2014.

8. Dunn, S.E. and D.R.U. Knappe. Disinfection By-Product Precursor and Micropollutant Removal by Powdered Activated Carbon. Water Research Foundation: Denver, Colorado, 2013.

9. Ducoste, J.J., D.R.U. Knappe; and S.M. Alpert. Evaluation of Computational Fluid Dynamics (CFD) for Modeling UV-Initiated Advanced Oxidation Processes. Water Research Foundation: Denver, Colorado, 2011.

10. Knappe, D.R.U.; B. Yuncu; and Qianru Deng. *Removal of 2-Methylisoborneol and Geosmin by High-Silica Zeolites and Zeolite-Enhanced Ozonation*. Water Research Foundation: Denver, Colorado, 2010.

11. Knappe, D.R.U.; A. Rossner; S.A. Snyder; and C. Strickland. *Alternative Adsorbents for the Removal of Polar Organic Contaminants*. American Water Works Association Research Foundation: Denver, Colorado, 2007, 110 pages.

12. Knappe, D.R.U.; R.C. Belk; D.S. Briley; S.R. Gandy; N. Rastogi; A.H. Rike; H. Glasgow; E. Hannon; and W.D. Frazier. *Algae Detection and Removal Strategies for Drinking Water Treatment Plants*. American Water Works Association Research Foundation: Denver, Colorado, 2004, 466 pages.

13. Knappe, D.R.U.; L. Li; P.A. Quinlivan; and T.B. Wagner. *Effects of Activated Carbon Surface Chemistry and Pore Structure on the Adsorption of Trichloroethene and Methyl Tertiary-Butyl Ether from Natural Water*. American Water Works Association Research Foundation: Denver, Colorado, 2003, 74 pages.

14. Cannon, F.S.; D.R.U. Knappe; V.L. Snoeyink; R.G. Lee; J.R. DeWolfe; and G. Dagois. *The Effect of Metals on Thermal Regeneration of Granular Activated Carbon*. American Water Works Association Research Foundation: Denver, Colorado, 1994, 183 pages.

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American Water Works Association Research Foundation or AwwaRF) undergo peer review by a project advisory committee comprised of two to four members from academia and environmental engineering practice. Reports are published by the Foundation and are the principal product for Foundation subscribers.

Conference Presentations (with papers)

1. Lopez-Velandia, C. and D.R.U. Knappe. "1,4-Dioxane: Occurrence, sources, and treatment options for an emerging surface water contaminant." In *Proc. of the AWWA Annual Conference*, Chicago, IL, Jun. 19-22, 2016.

2. McElroy, A., M. Hyman, C. Smith, and D. Knappe. "Biological Degradation of 1,4-Dioxane at Drinking Water Relevant Concentrations." In *Proc. of the AWWA Water Quality Technology Conference*, Salt Lake City, UT, Nov. 15-19, 2015.

3. Sun, M., C. Lopez-Velandia, A. Eaton, and D.R.U. Knappe*. "1,4-Dioxane in North Carolina Surface Water: Occurrence Data and Regulatory Framework." In *Proc. of the AWWA Water Quality Technology Conference*, New Orleans, LA, Nov. 16-20, 2014.

4. Arevalo, E.C., M. Strynar, A. Lindstrom, L. McMillan, and D.R.U. Knappe. "Removal of perfluorinated compounds by anion exchange resins: Identifying effective resin regeneration strategies." In *Proc. of the AWWA Annual Conference*, Boston, MA, Jun. 8-12, 2014.

5. Ingham, R. and D.R.U. Knappe*. "Evaluation of Henry's Law Constants and Freundlich Adsorption Constants for Carcinogenic Volatile Organic Compounds." In *Proc. of the AWWA Annual Conference*, Boston, MA, Jun. 8-12, 2014.

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10. Reinert, A.M. *, A. Kennedy, R.S. Summers, and D.R.U. Knappe. "Scale-Up of Rapid Small-Scale Column Test Data for Micropollutant Removal from Surface Water." In *Proc. of the*

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15. Dudley, L.M. *, M. Strynar, A. Lindstrom, L. McMillan, and D.R.U. Knappe. "Removal of perfluorinated compounds by powdered activated carbon: Effect of adsorbent and background water characteristics." AWWA Annual Conference, Dallas, TX, June 10-14, 2012.

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1. Kotlarz, N., Hopkins, Z., and Knappe, D.R.U. Can hydrogen peroxide enhance 1,4-dioxane oxidation by ozone in Cape Fear River water and lower bromate formation? *255th ACS National Meeting*, New Orleans, LA, March 18-22, 2018.

2. Hopkins, Z.R., McCord, J., Strynar, M., Lindstrom, A., and Knappe D.R.U. Detection and Treatment of Per- and Polyfluoroalkyl substances in the Cape Fear River basin of North

Carolina. *255th ACS National Meeting*, New Orleans, LA, March 18-22, 2018.

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4. Hopkins, Z. and Knappe, D.R.U. Treatment Of 1,4-Dioxane In Surface Water By Ozone And Advanced Oxidation Processes. AWWA Annual Conference. Philadelphia, PA, June 11-14, 2017.

5. Knappe, D.R.U., Dudley, L.A., Arevalo, E., Strynar, M., Lindstrom, A., and PFAS Removal by Activated Carbon Adsorption & Anion Exchange. AWWA Annual Conference. Philadelphia, PA, June 11-14, 2017.

6. Sun, M., Dudley, L.A., Arevalo, E., Strynar, M., Lindstrom, A., and Knappe, D.R.U. Removal of traditional and emerging perfluoroalkyl substances by powdered activated carbon adsorption and anion exchange. AWWA Water Quality Technology Conference. Indianapolis, IN, November 13-17, 2016.

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37. Fotta, M.E.*, A. Reinert*, and D.R.U. Knappe. "Evaluation of Scale-Up Approaches for the Design of Granular Activated Carbon Contactors." *91st NC AWWA/WEA Annual Conference*, Concord, NC. November 13-16, 2011.

38. Dudley, L.M.*, M. Strynar, A. Lindstrom, L. McMillan, and D.R.U. Knappe. "Removal of Perfluorinated Compounds by Powdered Activated Carbon: Effect of Base Material and Particle Size." *91st NC AWWA/WEA Annual Conference*, Concord, NC. November 13-16, 2011.

39. Mastropole, A.*, Fotta, M., Kennedy, A., Thurman, M.E., Ferrer, I., Summers, R.S., and Knappe, D.R.U. "Scale-Up Approaches for the Design of GAC Contactors: Emerging Contaminant Mixtures at Environmentally Relevant Concentrations." *AWWA Annual Conference*, Washington, DC, Jun. 12-16, 2011.

40. Dunn, S.E.* and D.R.U. Knappe. "Effect of powdered activated carbon base material and size on disinfection byproduct precursor removal." *Engineering Day at the NC Legislature*, Raleigh, NC. April 27, 2011. Winning poster in the Grand Challenges Competition for Providing Access to Clean Water. Also winner of People's Choice Award.

41. Ged, E.* and D.R.U. Knappe. "Effectiveness of superfine powdered activated carbon for the removal of sulfamethoxazole." *20th Annual NC State Undergraduate Research Symposium*, Raleigh, NC. April 12, 2011. Poster was selected as one of four winners in the Engineering category.

42. Dunn, S.E.* and D.R.U. Knappe. "Effect of powdered activated carbon base material and size on disinfection byproduct precursor removal." *2011 WRRI Annual Conference and NCWRA Symposium*, Raleigh, NC. March 22-23, 2011. Received 2nd Prize in the Best Poster Award Competition.

43. Dudley, L.M., Q. Deng, M. Hennessy, and D.R.U. Knappe*. "Treatment Options for the Removal of Emerging Pollutants of Concern." *2011 WRRI Annual Conference and NCWRA Symposium*, Raleigh, NC. March 22-23, 2011.

44. Deng, Q., K. Ohno, and D.R.U. Knappe. "Removal of pharmaceuticals from drinking water by powdered activated carbon." *89th NC AWWA/WEA Annual Conference*, Raleigh, NC. November 15-18, 2009.

45. B. Yuncu and D.R.U. Knappe. "Removal of taste and odor compounds in drinking water with zeolite-enhanced ozonation." *89th NC AWWA/WEA Annual Conference*, Raleigh, NC. November 15-18, 2009. Received 1st Prize in the Best Poster Award Competition.

46. Waligora, M.C. and D.R.U. Knappe. "Starch-based polymers as a green coagulant aid alternative for the treatment of drinking water." *89th NC AWWA/WEA Annual Conference*, Raleigh, NC. November 15-18, 2009.

47. I.A. Mezzari,* J. Saquing, D.R.U. Knappe, and M.A. Barlaz. "Development of a Fate and Transport Model for Organic Chemicals in Landfills." *The 5th Intercontinental Landfill Research Symposium*, Copper Mountain Conference Center, CO, Sept. 10-12, 2008.

48. M. Srb,* C. Baeza, and D.R.U. Knappe. "Kinetics of Sulfonamide Removal by Low-Pressure UV Photolysis and UV/H_2O_2 Advanced Oxidation Processes. *IWA World Water Congress and Exhibition*, Vienna, Austria, Sept. 7-12, 2008.

49. S. Velten,* D.R.U. Knappe, and M. Boller. "Effects of Natural Organic Matter Preloading on Physical Characteristics and Remaining MTBE Adsorption Capacity of Granular Activated Carbon." *IWA World Water Congress and Exhibition*, Vienna, Austria, Sept. 7-12, 2008.

50. D.R.U. Knappe* and C. Baeza. "UV/H_2O_2 Oxidation of Antimicrobial Compounds: Biochemical Activity and Biodegradability of Oxidation Intermediates." *5th IWA Leading-Edge Conference & Exhibition on Water & Wastewater Technologies*, Zurich, Switzerland, June 1-4, 2008.

51. B. Yuncu and D.R.U. Knappe.* "Use of high-silica zeolites for the targeted removal of taste and odor compounds from drinking water." *235th ACS National Meeting*, New Orleans, LA, April 6-10, 2008.

52. R.S. Summers,* D. Dani; B. Zachman; C. Corwin; N. Blute; M. McGuire; and D.R.U. Knappe. "MTBE Adsorption: Evaluating EBCT, competition, and fouling." *235th ACS National Meeting*, New Orleans, LA, April 6-10, 2008.

53. C. Baeza* and D.R.U. Knappe. "Removal of antimicrobial compounds and their associated biochemical activity by UV photolysis and UV/H_2O_2 processes." *233rd ACS National Meeting*, Chicago, IL, March 25-29, 2007. In *Abstracts of Papers of the American Chemical Society – Division of Environmental Chemistry*, Vol. 47, No. 1.

54. Rossner, A.* and D.R.U. Knappe. "MTBE adsorption kinetics on alternative adsorbents and packed bed adsorber performance." *233rd ACS National Meeting*, Chicago, IL, March 25-29, 2007. In *Abstracts of Papers of the American Chemical Society – Division of Environmental Chemistry*, Vol. 47, No. 1.

55. Mezzari, I.A.; T.F. Speth; and D.R.U. Knappe.* "Prediction of organic contaminant adsorption isotherms on activated carbons." *233rd ACS National Meeting*, Chicago, IL, March 25-29, 2007. In *Abstracts of Papers of the American Chemical Society – Division of Environmental Chemistry*, Vol. 47, No. 1.

56. Rossner, A.; S.A. Snyder; and D.R.U. Knappe.* "Adsorption of emerging organic contaminant mixtures by alternative adsorbents." *233rd ACS National Meeting*, Chicago, IL, March 25-29, 2007. In *Abstracts of Papers of the American Chemical Society – Division of Environmental Chemistry*, Vol. 47, No. 1.

57. Mezzari, I.A.* and D.R.U. Knappe. "Predicting the Adsorption Capacity of Activated Carbon for Emerging Organic Contaminants from Fundamental Adsorbent and Adsorbate Properties." *86th NC AWWA/WEA Annual Conference*, Greensboro, NC. November 12-15, 2006. (Poster won 1st place in best poster competition).

58. Rossner, A.* and D.R.U. Knappe. "Adsorption kinetics of MTBE on alternative adsorbents." *86th NC AWWA/WEA Annual Conference*, Greensboro, NC. November 12-15, 2006.

59. Bartelt-Hunt, S. L., Barlaz, M. A., Knappe, D. R. U. and P. Kjeldsen. "Fate of Chemical Warfare Agents and Toxic Industrial Chemicals in Landfills," *4th Intercontinental Landfill Research Symposium*, Gallivare, Sweden, June 14 – 16, 2006.

60. Baeza, C.* and D.R.U. Knappe. "Removal of an Antimicrobial Compound by Sequential Photochemical and Biological Oxidation Processes." *85th NC AWWA/WEA Annual Conference*, Greensboro, NC. November 13-16, 2005. (Poster won 2nd place in best poster competition).

61. D.R.U. Knappe.* "Activated Carbon Characteristics and the Prediction of Aqueous-Phase Adsorption Isotherms." Invited presentation at the *230th ACS National Meeting*, Washington, DC, August 28 – September 1, 2005.

62. Bartelt-Hunt, S. L.*, Barlaz, M. A., Knappe, D. R. U. and P. Kjeldsen. "Assessment of the Behavior of Chemical Warfare Agents in Landfills." *AEESP Frontiers Conference*, Potsdam, NY, July 25 – 27, 2005.

63. Barlaz, M. A., Bartelt-Hunt, S. L., Knappe, D. R. U. and P. Kjeldsen. "Assessment of the Behavior of Chemical Warfare Agents in Landfills." *SWANA Landfill Symposium*, Boulder,

CO, June 6 – 9, 2005.

64. Chen, Y., Knappe, D. R. U. and M. A. Barlaz.* "The Effect of Aging on the Bioavailability of Toluene Sorbed to Municipal Solid Waste Components," *The 3rd Intercontinental Landfill Research Symposium*, Lake Toya, Japan, Nov. 30 – Dec. 2, 2004.

65. Rossner, A.A.* and D.R.U. Knappe. "Adsorption of MTBE on Alternative Adsorbents." *83rd NC AWWA/WEA Conference*, Greensboro, NC, Nov. 16-19, 2003.

66. Knappe, D.R.U. *; L. Li; P.A. Quinlivan; and G. Newcombe. "Recent Advances in Characterizing GAC Performance." Invited presentation at the IWA-sponsored *Global Conference on Leading Edge Water and Wastewater Treatment Technologies*, Noordwijk/Amsterdam, The Netherlands, May 26-28, 2003.

67. Zhang, Z.*; M.A. Barlaz; and D.R.U. Knappe. "Factors Affecting the Bioavailability of Tetrachloroethylene Sorbed to Municipal Solid Waste Components." *103rd General Meeting of the American Society for Microbiology*, Washington, DC, May 18-22, 2003.

68. Chen, L. *; M.A. Nanny; D.R.U. Knappe; T.B. Wagner; and N. Ratasuk. "Chemical Characterization and Sorption Capacity of Degraded Newsprint from a Landfill." *225th ACS National Meeting*, New Orleans, LA, March 23-27, 2003. In *Abstracts of Papers of the American Chemical Society – Division of Environmental Chemistry*, Vol. 43, No. 1.

69. Wu, B.; D.R.U. Knappe *; and M.A. Barlaz. "Modeling Toluene Desorption from Municipal Solid Waste Components." *2002 Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 6-10, 2002.

70. Zhang, Z.; L.E. Hoyle; D.R.U. Knappe*; and M.A. Barlaz. "Interactions between Hydrophobic Organic Contaminants and Dissolved Organic Matter in Methanogenic Leachate." *2nd Intercont. Landfill Research Symposium*, Asheville, NC, Oct. 13-16, 2002.

71. Zhang, Z.*; M.A. Barlaz; and D.R.U. Knappe. "Factors Affecting the Bioavailability of Tetrachloroethene Sorbed to Municipal Solid Waste Components." *2nd Intercontinental Landfill Research Symposium*, Asheville, NC, Oct. 13-16, 2002.

72. Wu, B., Knappe, D. R. U. and M. A. Barlaz. "Factors Controlling Alkylbenzene Sorption and Desorption to Municipal Solid Waste." *2nd Intercontinental Landfill Research Symposium*, Asheville, NC, Oct. 13-16, 2002.

73. Chen, Y. *; M.A. Barlaz; and D.R.U. Knappe. "Effect of Aging on the Bioavailability of Toluene Sorbed to Municipal Solid Waste Components." *Bioremediation and Biodegradation - Current Advances in Reducing Toxicity, Exposure and Environmental Consequences*, Pacific Grove, CA, June 9-12, 2002.

74. Knappe, D.R.U. * and L. Li. "Predicting the Adsorption Capacity of Activated Carbon from Fundamental Adsorbent and Adsorbate Properties." Invited presentation at the *IWA Workshop on Biological Activated Carbon Filtration*. Delft, The Netherlands, May 29-31,

2002.

75. Knappe, D.R.U.*; L. Li; and P.A. Quinlivan. "Activated Carbon Surface Chemistry and Pore Structure Effects on Adsorption of Volatile Organic Compounds from Natural Water." *2001 World Water Congress*, Berlin, Germany, October 15-19, 2001. (Abstract accepted for platform presentation, but trip was cancelled as a result of the Sept. 11 tragedies).

76. Newcombe, G.*; J. Morrison; C. Hepplewhite ; and D.R.U. Knappe. "Predicting PAC Doses for the Removal of Algal Metabolites: How Can NOM Characterization Techniques Help Us?" *AwwaRF/Cooperative Research Centre for Water Quality and Treatment/Vivendi Workshop: Relating NOM Characteristics to Improve Water Treatment Process Selection and Performance*, Berlin, Germany, October 10-12, 2001.

77. Li, L.*; P.A. Quinlivan; and D.R.U. Knappe. "Effects of Activated Carbon Surface Chemistry and Pore Structure on the Adsorption of MTBE from Natural Water." *222nd ACS National Meeting*, Chicago, IL, August 26-30, 2001. In *Abstracts of Papers of the American Chemical Society – Division of Environmental Chemistry*, Vol. 41, No. 2.

78. Wu, B.*; C.M. Taylor; D. R.U. Knappe; M.A. Barlaz; and M.A. Nanny. "Factors Controlling Alkylbenzene Sorption to Municipal Solid Waste." *222nd ACS National Meeting*, Chicago, IL, August 26-30, 2001. In *Abstracts of Papers of the American Chemical Society – Division of Environmental Chemistry*, Vol. 41, No. 2.

79. Wu, B.; C.M. Taylor; M.A. Barlaz; D.R.U. Knappe*; and M.A. Nanny. "Effects of Anaerobic Sorbent Degradation on the Sorption of Toluene and *o*-Xylene to municipal solid waste components." *2001 International Containment & Remediation Technology Conference and Exhibition*, Orlando, FL, June 10-13, 2001.

80. Barlaz, M.A. and D.R.U. Knappe*. "The Effects of Aging and Sorbent Decomposition on the Bioavailability of Toluene and *o*-Xylene in Solid Waste." *1999 US EPA Bioremediation Research Program Review*, Bloomingdale, IL, Nov. 2-4, 1999.

81. Barlaz, M.A.*; F.D. Sanin; and D.R.U. Knappe. "The Fate of Toluene and Dichloroethane in a Superfund Landfill." *In Situ and On-Site Bioremediation 5th International Symposium*, San Diego, CA, April 19-22, 1999.

82. Rastogi, N.; S.R. Gandy; and D.R.U. Knappe*. "Removal of Algae from Drinking Water by Conventional Treatment and Microsand-Enhanced Flocculation." *Annual NC Water Resources Research Conference*, Raleigh, NC, March 25, 1999.

83. Sanin, F.D.; M.A. Barlaz; and D.R.U. Knappe*. "Toluene Sorption, Humification, and Biodegradation in Excavated Refuse, a High Organic Carbon Sorbent." *AGU Spring Meeting*, Boston, MA, May 26-29, 1998.

84. Knappe, D.R.U.* "Strategies for Algae Removal in Drinking Water Treatment." *Annual NC Water Resources Research Conference*, Raleigh, NC, April 1, 1998.

85. Knappe, D.R.U. *; Y. Matsui; V.L. Snoeyink; P. Roche; M.J. Prados; and M.M. Bourbigot. "Predicting the Adsorption Capacity of Powdered Activated Carbon for Micropollutants." *American Carbon Society Workshop: Carbon Materials for the Environment*, Charleston, SC, June 9-12, 1996.

86. Snoeyink, V.L.* and D.R.U. Knappe. "Optimal Use of Powdered Activated Carbon for Pesticide Removal." *Second EPA National Drinking Water Treatment Technology Transfer Workshop*, Kansas City, MO, August 12-14, 1996.

87. Knappe, D.R.U. *; V.L. Snoeyink; F.S. Cannon; and R.G. Lee. "The Effect of Calcium on the Thermal Regeneration of Granular Activated Carbon." *AWWA Annual Conference*, Philadelphia, PA, June 23-27, 1991.

* indicates presenter

Invited Presentations

1. Knappe, D.R.U. Impacts of fluorochemical production and use on drinking water quality in North Carolina. University of Rhode Island, Kingston, RI, April 20, 2018.

2. Sun, M., Arevalo, E., Strynar, M., Lindstrom, A., and Knappe, D.R.U. Occurrence and control of legacy and emerging perfluoroalkyl substances in North Carolina. *255th ACS National Meeting*, New Orleans, LA, March 18-22, 2018. (Awards Session)

3. Knappe, D.R.U., Rossner, A.A., Dudley, L.A., and Sun, M. Factors controlling the adsorption of ionizable organic compounds to activated carbon. *255th ACS National Meeting*, New Orleans, LA, March 18-22, 2018.

4. Sun, M., Lopez-Velandia, C., McElroy, A., and Knappe, D.R.U. Rapid and sensitive method for the determination of 1,4-dioxane analysis in a wide range of aqueous matrices. *255th ACS National Meeting*, New Orleans, LA, March 18-22, 2018.

5. Hopkins, Z., Merrill, J., Sun, M., Arevalo, E., Lindstrom, A., Strynar, M., and Knappe, D.R.U. Impacts of perfluoroalkyl ether acids on drinking water quality in North Carolina. Emerging Contaminants Summit. Westminster, CO, March 6-7, 2018.

6. Knappe, D.R.U. Impacts of fluorochemical production and use on drinking water quality in North Carolina. University of Colorado – Boulder, Boulder, CO, October 6, 2017.

7. Sun, M., Arevalo, E., Dudley, L.A., Strynar, M., Lindstrom, A., and Knappe, D.R.U. Legacy and emerging per- and polyfluoroalkyl substances are challenging small (and large) surface water treatment systems in North Carolina. 14th Annual USEPA Drinking Water Workshop Cincinnati, OH, August 22, 2017

8. Knappe, D.R.U., Mezzari, I.A., and Speth, T.F. Combining the Polanyi-Dubinin-Manes framework with molecular models to predict adsorption isotherms of aqueous organic

contaminants on activated carbons. *252nd ACS National Meeting*, Philadelphia, PA, August 21-25, 2016.

9. Dudley, L.A., Sun, M., Arevalo, E., Lindstrom, A., Strynar, M., and Knappe, D.R.U. Factors controlling the adsorption of perfluoroalkyl substances by powdered activated carbon. *252nd ACS National Meeting*, Philadelphia, PA, August 21-25, 2016.

10. Greune, A. and Knappe, D.R.U. Effect of bromide discharges on source water bromide levels and disinfection by-product formation in North Carolina. *252nd ACS National Meeting*, Philadelphia, PA, August 21-25, 2016.

11. Knappe, D.R.U. Keynote: Activated carbon adsorption processes in the USA: Developments in research and application. Workshop: Adsorption in der Wasseraufbereitung: Renaissance einer bewährten Technologie, 27. Mülheimer Wassertechnisches Seminar, Mülheim, Germany, June 15, 2016.

12. Knappe, D.R.U. Water treatment options for perfluoroalkyl substances. Tsinghua University, Beijing, China, May 25, 2016.

13. Knappe, D.R.U., L.A. Dudley, E. Arevalo, M. Sun, M. Strynar, and A. Lindstrom. Water treatment options and challenges for perfluoroalkyl substances and fluorinated alternatives. *251st ACS National Meeting*, San Diego, CA, March 13-17, 2016.

14. Knappe, D. "Polanyi-Dubinin-Manes model framework to predict adsorption isotherms of aqueous organic contaminants on activated carbons." *37th International Activated Carbon Conference*, Orlando, FL, February 25-26, 2016.

15. Knappe, D. "Considerations for large and small utilities for addressing emerging contaminants from upstream sources." *Freshwater in the North Carolina Coastal Plain: Understanding and Preparing for 21st Century Challenges*. New Bern, NC, February 19, 2016.

16. Knappe, D.R.U.*, L.A. Dudley, E. Arevalo, A.B. Lindstrom, and M.J. Strynar. "Adsorption of perfluoroalkyl substances by powdered activated carbon." Clemson University, March 13, 2015.

17. Knappe, D.R.U. Carcinogenic volatile organic contaminant (cVOC) group rule. Charlotte Water Training Institute, Charlotte, NC, February 5, 2015.

18. Knappe, D.R.U. UCMR3 Update for North Carolina. Charlotte Water Training Institute, Charlotte, NC, February 5, 2015.

19. Knappe, D.R.U. Thoughts about the safety of our drinking water: Emerging surface water quality and drinking water treatment challenges in North Carolina Lunch and learn, West Raleigh Rotary Club, Oct. 17, 2014.

20. Knappe, D.R.U. Unregulated Data Communications Workshop - Recent North Carolina Research and Associated Data. City of Raleigh, Sept. 16, 2014.

21. Knappe, D.R.U. UCMR3 Update for North Carolina. NCWOA 2014 Remote Lab Tech Day, Winston-Salem, NC, August 27, 2014.

22. Knappe, D.R.U.*, A.C. Greune, and V.E. Edeback. "Uncovering the Trends of Increasing Bromide in North Carolina's Surface Waters: Sources and Impacts on Brominated DBPs throughout the State." In *Proc. of the AWWA Annual Conference*, Boston, MA, Jun. 8-12, 2014.

23. Knappe, D.R.U. Emerging surface water quality and water treatment challenges in North Carolina. CCEE Department Lunch and Learn, June 5, 2014.

24. Knappe, D.R.U.* and J. Fireline. "Fracking 101 - Shale Gas Extraction using Horizontal Drilling and Hydraulic Fracturing." *NC-AWWA/WEA Lab Technology Day*, Raleigh, NC, May 6, 2014.

25. Knappe, D.R.U. Adsorptive Removal of Micropollutants from Drinking Water Using Granular Activated Carbon and Superfine Powdered Activated Carbon. Technical University of Dresden, Germany, May 28, 2013,

26. Knappe, D.R.U. Adsorptive Removal of Micropollutants from Drinking Water Using Granular Activated Carbon and Superfine Powdered Activated Carbon. Technical University of Berlin, May 24, 2013.

27. Knappe, D.R.U.* and J. Fireline. "Bromide Occurrence in the Cape Fear River Basin." *Triad Area Utilities Meeting*, Greensboro, NC, April 11, 2013.

28. Knappe, D.R.U.* and J. Fireline. "Fracking 101 - Shale Gas Extraction using Horizontal Drilling and Hydraulic Fracturing." *92nd NC AWWA/WEA Annual Conference*, Raleigh, NC. November 11-14, 2012.

29. Knappe, D.R.U. "Disinfection byproducts in drinking water: Human health risks and risk management options." Genetic and Environmental Mutagenesis Society (GEMS) Meeting, Research Triangle Park, NC. April 24, 2012.

30. Knappe, D.R.U. "Control of Disinfection Byproduct Formation with Activated Carbon." Disinfection Byproducts Workshop, NC Public Water Supply Section, Division of Water Resources, Raleigh, NC. April 19, 2012.

31. Knappe, D.R.U. "Suffolk County Water Authority VOC Case Study." AWWA Carcinogenic Volatile Organic Contaminant Workshop, Suffolk County Water Authority, Long Island, NY. March 28, 2012.

32. Knappe, D.R.U. "Granular Activated Carbon Adsorption: Opportunities for Process Optimization." Suffolk County Water Authority, Long Island, NY. June 16, 2011.

33. Knappe, D.R.U. "Algal Performance Issues for Water Treatment Plants." Emerging Water Quality Issues Committee - Algae Workshop, AWWA Annual Conference, Washington, DC. June 12, 2011.

34. Knappe, D.R.U. "Emerging Contaminants and Water Scarcity – Perspectives from North Carolina and Beyond." Keynote address – Emerging Contaminants Research: Implications for Water Treatment, Wastewater Treatment, and Utility Planning. Hazen & Sawyer Workshop, Cary, NC. February 17, 2011.

35. Knappe, D.R.U. "Staying Ahead of the Curve – Advanced Treatment Technologies for Water Reuse." Public Health – Reclaim to Sustain Workshop, NCAWWA-WEA, Raleigh, NC, Mar. 9, 2010

36. Knappe, D.R.U. "Disinfection byproducts: Do current regulatory approaches in the U.S. effectively reduce risk?" Workshop EULA 2010, Universidad de Concepcion, Concepcion, Chile, January 8, 2010.

37. Knappe, D.R.U. "Treatment Options for Water Reclamation." Invited presentation, Public Health & Reclaimed Water Workshop, NC DENR, Raleigh, NC, Aug. 27, 2009.

38. Knappe, D.R.U. "Removal of Pharmaceuticals and EDCs by Oxidation and Adsorption." Invited seminar, Dept. of Environmental and Molecular Toxicology, NC State University, Raleigh, NC, Oct. 14, 2008.

39. Knappe, D.R.U. "Removal of Pharmaceuticals and Endocrine Disrupting Chemicals by Oxidation and Adsorption." *NC/GA/SC Watershed Symposium & Drinking Water Technology Forum*, Concord, NC, Sept. 17-19, 2008.

40. Knappe, D.R.U. "Adsorptive and Oxidative Removal of Trace Organic Pollutants." Invited seminar at the Technologiezentrum Wasser, University of Karlsruhe, Germany, May 29, 2008.

41. Knappe, D.R.U. "Emerging Issues and Technologies in Water and Wastewater Treatment." Invited presentation, WRRI Advisory Committee Meeting, Raleigh, NC, May 13, 2008.

42. Knappe, D.R.U.* "Activated Carbon Characteristics That Matter for Organic Micropollutant Removal from Drinking Water." Invited presentation at the workshop "Advances in the Use of Activated Carbon." *AWWA Water Quality Technology Conference*, Charlotte, NC, Nov. 4-8, 2007.

43. Knappe, D.R.U.* "Removal of Wastewater-Derived Organic Contaminants and Their Associated Biochemical Activity by Low Pressure UV/H_2O_2 Treatment." Invited presentation at the workshop "Advanced Oxidation Technologies in Water Treatment: Fundamentals and Applications." *AWWA Water Quality Technology Conference*, Charlotte,

NC, Nov. 4-8, 2007.

44. Knappe, D.R.U.* "Activated Carbon Characteristics and the Prediction of Aqueous-Phase Adsorption Isotherms." Invited presentation at the *230th ACS National Meeting*, Washington, DC, August 28-September 1, 2005.

45. Knappe, D.R.U.* "*A priori* Prediction of Adsorption Isotherms on Activated Carbons." Invited seminar, Dept. of Civil and Environmental Engineering, University of Illinois, Urbana, April 25, 2006.

46. Knappe, D.R.U.* "Activated Carbon Adsorption Processes – Effects of Adsorbent Properties on the Removal of Trace Organic Contaminants." Invited lecture, Dept. of Urban Environmental Engineering, Hokkaido University, June 2, 2005.

47. Knappe, D.R.U.* "Predicting Adsorption Isotherms from Fundamental Adsorbent and Adsorbate Properties." Invited presentation at EAWAG: Swiss Federal Institute for Environmental Science and Technology, Dübendorf, Switzerland, June 3, 2004.

48. Knappe, D.R.U.* "Strategies for Algae Detection and Removal in Water Treatment." Invited presentation at the Jordan Lake Stakeholder Meeting, NC A&T State University, Greensboro, NC, January 29, 2004.

49. Knappe, D.R.U.*; L. Li; P.A. Quinlivan; and G. Newcombe. "Recent Advances in Characterizing GAC Performance." Invited presentation at the IWA-sponsored *Global Conference on Leading Edge Water and Wastewater Treatment Technologies*, Noordwijk/Amsterdam, The Netherlands, May 26-28, 2003.

50. Glasgow, H.B.*; J.M. Burkholder; B.W. Touchette; L.C. Ehrlich; D.R.U. Knappe; and E.H. Allen. "Impacts of Toxigenic Cyanobacteria on North Carolina Waterways." Invited Presentation at a NCDENR and NCPH-sponsored workshop entitled *Blue Green Algae and Public Water Supplies*, Hickory, NC, February 19, 2003; Asheville, NC, February 25, 2003; Statesville, NC, February 26, 2003.

51. Knappe, D.R.U. * and L. Li. "Predicting the Adsorption Capacity of Activated Carbon from Fundamental Adsorbent and Adsorbate Properties." *IWA Workshop on Biological Activated Carbon Filtration*. Delft, The Netherlands, May 29-31, 2002.

52. "Teleconference on Taste & Odor in Drinking Water: Operational Tools and Techniques for Identification and Control." University of North Carolina at Chapel Hill, May 21, 2001.

53. Knappe, D.R.U. * "Strategies for Algae Detection and Algae Removal in Water Treatment." Duke University, Durham, NC, February 26, 2001.

54. Knappe, D.R.U. *; D.S. Briley; and N. Rastogi. "Optimized Treatment to Minimize the Impacts of Algae on Finished Water Quality." *Annual NC AWWA & WEA Conference*, Research Triangle Park, NC, November 8-11, 1998.

55. Knappe, D.R.U. *; D.S. Briley; and N. Rastogi. "Optimized Treatment to Minimize the Impacts of Algae on Finished Water Quality." *Conference of the Canadian Water and Wastewater Association*, Quebec City, Quebec, October 28-30, 1998.

56. "Teleconference on Adsorption and Membrane Treatment Technologies: Applications to Water Utilities in North Carolina." UNC-Chapel Hill, July 24, 1997.

* indicates presenter

Honors and Awards

1. Advisor for the 1st and 2nd prize winners at the student poster award competition at the *97th NCAWWA/WEA Annual Conference*, November 2017.

2. Best paper award for our 2016 publication "Legacy and Emerging Perfluoroalkyl Substances Are Important Drinking Water Contaminants in the Cape Fear River Watershed of North Carolina" in *ES&T Letters*, 2017

3. Advisor for the 3rd prize winner in Engineering at the NCSU Graduate Research Symposium, March 23, 2016.

4. Advisor for the 1st and 2nd prize winners at the student poster award competition at the *95th NCAWWA/WEA Annual Conference*, November 2015.

5. NSF Science Nation video of our 1,4-dioxane research in the Cape Fear River watershed, 2015

6. Advisor for the 1st prize winner at the student poster award competition at the *93rd NCAWWA/WEA Annual Conference*, 2013.

7. Thesis advisor for the 1st place winner in the 2013 American Water Works Association Academic Achievement Award competition for the best Master's Thesis (Annual national competition. Award was given for Susan Dunn's MS thesis entitled "Effect of powdered activated carbon base material and size on disinfection by-product precursor and trace organic pollutant removal").

8. Advisor for the 2nd prize winner at the student poster award competition at the *92nd NCAWWA/WEA Annual Conference*, 2012.

9. Advisor for the 3rd prize winner at the student poster award competition at the *WRRI Annual Conference and NCWRA Symposium*, 2012.

10. Thank a Teacher Recipient, Fall 2011.

11. Outstanding Teacher Award, NC State University, 2011.

12. Advisor for a winning poster at the *20th Annual NC State Undergraduate Research Symposium*, 2011.

13. Winning poster in the Grand Challenges Competition for Providing Access to Clean Water, College of Engineering, NC State University, 2011. Poster was also winner of People's Choice Award at Engineering Day at the NC Legislature.

14. Advisor for the winner of the Best Student Paper Award at the American Water Works Association Water Quality Technology Conference, 2007

15. Thesis advisor for the 2nd place winner in the 2007 American Water Works Association Academic Achievement Award competition for the best Master's Thesis (Annual national competition. Award was given for Isabella Mezzari's MS thesis entitled "Predicting the adsorption capacity of activated carbon for organic contaminants from fundamental adsorbent and adsorbate properties").

16. AWWA Water Science & Research Division Best Poster Award, 2006 (Award for best research poster at the Annual AWWA Conference and Exhibition)

17. Bill Horn Kimley-Horn Faculty Award for excellence in graduate and undergraduate teaching and other accomplishments, Department of Civil, Construction, and Environmental Engineering, NC State University, 2003.

18. AWWA Water Science & Research Division Best Paper Award, 2001 (Annual award presented by the American Water Works Association for the best research paper published in Journal AWWA – the award was given for the paper entitled "Atrazine Removal by Preloaded GAC" that appeared in the October 1999 issue).

19. Young Civil Engineer Achievement Award, University of Illinois, 2000 (Annual award presented by the University of Illinois Civil and Environmental Engineering Alumni Association to three outstanding alumni).

20. Thesis advisor for the 2nd place winner in the 1999 AEESP/Montgomery Watson Master's Thesis Award Competition (Annual national competition. Award was given for David Briley's MS thesis entitled "Optimization of coagulation conditions for the removal of algae in conventional water treatment").

B. Research Project Record

Sponsored Research

1. **Title:** Assessing Impact Of Drinking Water Exposure To Genx (hexafluoropropylene Oxide Dimer Acid) In The Cape Fear River Basin, North Carolina. PI: Hoppin, J. Co-PIs: Smart, R.; Knappe, D.; May, K. Agency: National Institute of Environmental Health Sciences

(NIEHS) ($311,399; 11/1/17-10/31/18).

2. **Title:** Collaborative Research: Eager: Tailored Sorbents For The Removal Of Emerging Per- And Polyfluorinated Alkyl Substances From Water. PI: Knappe, D.R.U. Agency: National Science Foundation ($35,000; 9/15/17-8/31/18). An equal amount of funding was awarded to Kevin O'Shea, Dept. of Chemistry, Florida International University.

3. **Title:** Electrically Assisted Sorption and Desorption of Per- and Polyfluoroalkyl Substances. PI: Call, D. Co-PI: Knappe, D.R.U. Agency: Strategic Environmental Research and Development Program ($200,000; 5/16/18-5/16/19).

4. **Title:** Field Demonstration and Comparison of Ex-Situ Treatment Technologies for Poly- and Perfluoroalkyl substances (PFASs) in Groundwater. PI. Knappe, D.R.U. Agency: Water Research Foundation (Prime: Department of Defense)($200,011; 5/16/18-5/16/20).

5. **Title:** Center for Human Health and the Environment. PI: Smart, R.C. Co-PIs: many. Agency: National Institutes of Health ($4,754,972; 4/20/15-3/31/19).

6. **Title:** Occurrence of Pesticides in North Carolina Private Drinking Water Wells and Identification of Point-of-Use Treatment Options. PI: Knappe, D.R.U. Co-PIs: LePrevost, C.; de los Reyes, F. Agency: North Carolina Water Resources Research Institute ($120,000; 3/1/18 – 2/28/20).

7. **Title:** Cometabolic Degradation of 1,4-Dioxane in Biologically Active Carbon Filters with Locally Enriched Biota. PI: Knappe, D.R.U (for PhD student Amie McElroy). Agency: North Carolina Water Resources Research Institute ($10,000; 3/1/18 – 2/28/19).

8. **Title:** Design and Application of Cyclodextrin-Based Materials for the Treatment of Legacy and Emerging Perfluoroalkyl Acids. PI: Knappe, D.R.U (for PhD student Zachary Hopkins). Agency: North Carolina Water Resources Research Institute ($10,000; 3/1/18 – 2/28/19).

9. **Title:** EAGER; GOALI: Perfluoroethercarboxylic acids – a new class of drinking water contaminants. PI: Knappe, D.R.U. Agency: National Science Foundation ($89,849; 9/1/15-8/31/16).

10. **Title:** Development of Appropriate Technologies to Treat Drinking Water Co-Contaminants Associated with Chronic Kidney Disease of Unknown Origin. PI: Knappe, D.R.U. Co-PIs: Hoppin, J., Duckworth, O., Polizzotto, M. Agency: NCSU-RISF ($25,000; 1/1/17-12/31/17).

11. **Title:** RAPID; GOALI: Sources of 1,4-Dioxane in the Cape Fear River Watershed of North Carolina and Treatment Options for 1,4-Dioxane Control. PI: Knappe, D.R.U. Agency: National Science Foundation ($50,000; 8/15/14-7/31/15).

12. **Title:** The Effects of Contaminated Soil and Groundwater on Subsurface Utilities, Surface Water and Drainage. PI: Pour-Ghaz, M. Co-PIs: Gabr, M.; Knappe, D.R.U. Agency: NC Dept. of Transportation ($345,381; 8/1/16-7/31/18).

13. **Title:** Generation of Biodegradation - Sorption Barriers for Munitions Constituents. PI: Borden, R.C. Co-PI: Knappe, D.R.U. Agency: US Army Corps of Engineers ($820,000; 3/30/11 – 3/30/16).

14. **Title:** 1,4-Dioxane in North Carolina Drinking Water Sources: Occurrence and Treatment Options. PI: Knappe, D.R.U. Agency: North Carolina Urban Water Consortium ($120,531; 5/15/14 – 5/14/16).

15. **Title:** Evaluation of Flocculants: Optimizing Characteristics and Screening Methods. PI: McLaughlin, R. Co-PI: Knappe, D.R.U. Agency: North Carolina Department of Transportation ($199,523; 8/16/14 – 8/15/16).

16. **Title:** GAC Control of Regulated and Emerging DBPs of Health Concern. PI: Knappe, D.R.U. Agency: Hazen & Sawyer – Prime: Water Research Foundation ($89,998; 2/5/15 – 3/18/17).

17. **Title:** Numerical Modeling of Post-Remediation Impacts of Anaerobic Bioremediation on Groundwater Quality. PI: Borden, R.C. Co-PI: Knappe, D.R.U. Agency: Strategic Environmental Research and Development Program (SERDP) ($506,874; 3/22/11-3/22/15).

18. **Title:** Evaluation of cVOC Removal Efficiencies by Various Technologies. PI: Knappe, D.R.U. Agency: ARCADIS – Prime: Water Research Foundation ($105,000; 10/1/13 – 9/30/15).

19. **Title:** Evaluation of Henry's Law Constant and Freundlich Adsorption Constant for VOCs. PI: Knappe, D.R.U. Agency: Water Research Foundation ($100,000; 10/1/12 – 9/1/15).

20. **Title:** Survey of Existing Volatile Organic Compound (VOC) Treatment Installations. PI: Knappe, D.R.U. Agency: ARCADIS – Prime: Water Research Foundation ($60,000; 10/1/12 – 9/30/14).

21. **Title:** Bromide Occurrence In North Carolina Drinking Water Sources And Effect On Disinfection By-product Formation. PI: Knappe, D.R.U. Agency: North Carolina Water Resources Research Institute and Urban Water Consortium ($87,964; 3/1/13 – 11/28/14).

22. **Title:** New water Treatment Technology Utilizing Non-Thermal Plasma Technology. PI: Shannon, S. (NE, NCSU), co-PI: Knappe, D.R.U. Agency: NCSU Chancellor's Innovation Fund ($72,213; 7/15/13-7/14/14).

23. **Title:** Removal of perfluorinated compounds by powdered activated carbon blends, superfine powdered activated carbon, and magnetic anion exchange resins PI: Knappe, D.R.U. Agency: Water Research Foundation ($150,000; 1/1/11 – 12/31/13).

24. **Title:** Effectiveness of sub-micrometer sized powdered activated carbon for the combined removal of disinfection by-product precursors and trace organic pollutants. PI: Knappe, D.R.U. Agency: Water Research Foundation ($150,000; 10/1/09 – 10/31/12).

25. **Title:** Evaluation of scale-up approaches for the design of GAC contactors. PIs: Summers, R.S. (University of Colorado) and Knappe, D.R.U. Agency: Water Research Foundation ($350,000; 5/1/10 – 10/31/12, NCSU budget is $155,000 plus $20,000 cash contribution from Suffolk County Water Authority).

26. **Title:** Treatment Options for the Removal of Emerging Pollutants of Concern. PI: Knappe, D.R.U. Agency: Urban Water Consortium ($52,919; 1/15/09 – 12/31/10).

27. **Title:** Protecting Receiving Waters: Removal of Biochemically Active Compounds from Wastewater by Ozonation and Activated Carbon Adsorption Processes PI: Knappe, D.R.U. Agency: NC Water Resources Research Institute ($50,000; 3/1/09 – 12/31/10).

28. **Title:** Development of an analytical method for taste and odor compounds and application to NC drinking water sources and finished waters. PI: Knappe, D.R.U. Agency: NC Water Resources Research Institute ($50,000; 3/1/08 – 8/31/09).

29. **Title:** Assessment Landfill Gas Pathway – Laboratory Simulation of Partitioning of Chemical and Biological Contaminants under Anaerobic Decomposition in a Landfill. PI: Barlaz, M. A.; co-PIs: Knappe, D.R.U. and de los Reyes, F.L. Agency: U.S. Environmental Protection Agency ($700,000, 9/1/04 – 12/31/09).

30. **Title:** Decision Support Tool Guidance Document for Management of Debris from Incidents of National Significance. PI: Barlaz, M. A.; co-PIs: Knappe, D.R.U. and de los Reyes, F.L. Agency: Eastern Research Group ($60,282, 9/5/08 – 4/29/09).

31. **Title:** Evaluation of Computational Fluid Dynamics (CFD) for Modeling UV-Initiated Advanced Oxidation Processes. PI: Ducoste, J.; co-PI: Knappe, D.R.U. Agency: American Water Works Association Research Foundation ($150,000; 1/1/06 – 5/15/09).

32. **Title:** Removal of 2-Methylisoborneol and Geosmin with High-Silica Zeolites and Zeolite-Enhanced Ozonation. PI: Knappe, D.R.U. Agency: American Water Works Association Research Foundation ($150,000; 2/1/06 – 5/15/09).

33. **Title:** Impact of UV Location and Sequence on By-Product Formation. PI: Knappe, D.R.U. Agency: NC Water Resources Research Institute Subcontract – primary sponsor is AwwaRF ($21,899; 1/1/08 – 12/31/08).

34. **Title:** Protecting Receiving Waters: Removal of Biochemically Active Compounds from Wastewater by Sequential Photochemical and Biological Oxidation Processes. PI: Knappe, D.R.U. Agency: NC Water Resources Research Institute ($50,000; 3/1/07 – 8/31/08).

35. **Title:** Effect of Prolonged Heating on the Asphalt-Aggregate Bond Strength of HMA Containing Liquid Antistrip Additives. PI: Tayebali, A.A. (NCSU), co-PI, Knappe, D.R.U. Agency: NC Department of Transportation ($163,790; 7/1/06 – 6/30/08).

36. **Title**: High-Silica Zeolites for the Removal of Polar Organic Contaminants from Drinking Water - Development of a 'Green' Adsorption/Regeneration System. PI: Knappe, D.R.U.

Agency: American Water Works Association Research Foundation ($150,000; 2/15/03 – 2/14/06).

37. **Title**: Predicting Single-Solute Adsorption Isotherms for Non-Regulated Contaminants from Fundamental Adsorbent and Adsorbate Properties. PI: Knappe, D.R.U. Agency: U.S. Environmental Protection Agency ($65,000; 8/16/03 – 9/30/06).

38. **Title**: Sequestration Mechanisms and Bioavailability of Tetrachloroethene and Toluene in Solid Waste. Co-PIs: Barlaz, M.A. (NCSU), Knappe, D.R.U. (NCSU) and M. A. Nanny (University of Oklahoma). Agency: National Science Foundation ($566,560; 9/1/01 – 8/31/05). The two co-PIs at NCSU have equal responsibility for this project; University of Oklahoma is a subcontractor.

39. **Title**: Assessment of the Behavior of Chemical and Biological Contaminants in Landfills. PI: Barlaz, M. A. (Knappe, D. R. U. and de los Reyes, F. are also working on this project). Agency: U.S. Environmental Protection Agency. ($100,000, 12/1/03 – 6/30/05).

40. **Title**: Quantifying Anti-Strip Additive in Asphalt (Binders and Mixes). PI: Tayebali, A.A. (NCSU), co-PI, Knappe, D.R.U. Agency: NC Department of Transportation ($111,914; 7/1/03 – 12/31/04).

41. **Title:** Effects of Activated Carbon Surface Chemistry and Pore Structure on the Adsorption of Methyl Tertiary-Butyl Ether and Trichloroethene from Natural Waters. PI: Knappe, D.R.U. Agency: American Water Works Association Research Foundation ($149,985; 1/1/99 – 4/01/02).

42. **Title:** The Effects of Aging and Sorbent Decomposition on the Bioavailability of Toluene and Xylene in Solid Waste. Co-PIs: Barlaz, M.A. (NCSU) and Knappe, D.R.U. Agency: U.S. Environmental Protection Agency ($425,000; 10/1/98 – 3/31/02). The two co-PIs had equal responsibility for this project.

43. **Title:** Optimization of Treatment to Mitigate Impacts of Algae and Algae Control on Finished Water Quality, PI: Knappe, D.R.U., Co-PIs: S. Liehr (NCSU) and J. Burkholder (NCSU). Agency: American Water Works Association Research Foundation and the North Carolina Urban Water Consortium (AWWARF $299,442 plus $24,886 supplement, NC Urban Water Consortium $33,000; in-kind contributions $99,064; 12/1/96 – 5/15/00).

Unsponsored and independent research

1. **Title:** Treatment Strategies for the Combined Removal of VOCs and 1,4-Dioxane from Suffolk County Groundwater (Students: H. Chmielewski and S. Troutman, supported through DHS Fellowship to H.C.), ongoing with S. Ranjithan.

2. **Title:** Advanced Oxidation Technologies for the removal of pharmaceutically active compounds from drinking water (Student: A. Carolina Baeza, supported through an NSF

Graduate Research Fellowship and an NWRI Fellowship), completed Dec. 2009.

3. **Title:** Employing artificial neural networks and genetic algorithms to optimize turbidity and natural organic matter removal in drinking water treatment (Student: A. O. Savas, in collaboration with Dr. S. Ranjithan)

4. **Title**: Adsorption of methyl tertiary-butyl ether on high-silica zeolites (Students: A. Olsson, J. Williams)

5. **Title**: Implementation of an HPLC method to quantify trace levels of hydroxydesethylatrazine in deionized, distilled water and in tap water (Student: G. C. Rucker)

C. Cross-Disciplinary Activities

1. Member of NCSU's Center for Human Health and the Environment. Participated in the development of a time-sensitive R21 proposal that was selected for funding. Currently working on a Superfund Research Center proposal.

2. Successfully developed a collaborative NSF EAGER proposal with Kevin O'Shea in the Department of Chemistry at Florida International University.

3. Member of a team of researchers that developed a successful GRIP proposal entitled "Water Sustainability through Nanotechnology: Nanoscale Science and Engineering at the Solid-Water Interface."

4. Participated in preparation of NSF NRT Proposal "NRT: Resilience of Infrastructure Systems and the Environment (RISE)." (not selected for funding).

5. Member of NCSU Research Network on Water Solutions (ReNeWS).

6. Participated in writing NSF ERC Proposal "RENEE: Resilient Nutrients, Energy, and Environment." Lead: Arizona State University (not selected for funding).

7. Organizer of "Activated Carbon Adsorption" Session at the 2013 AWWA Annual Conference. Denver, CO, June 9-13, 2013.

8. Submitted Chancellor Innovation Fund (CIF) proposal with Dr. S. Shannon (NCSU, Nuclear Engineering). Spring 2012 (not selected for funding), revised and re-submitted in Spring 2013 and selected for funding.

9. Participated in developing a Sustainable Research Networks preproposal that was submitted to NSF. Collaboration between multiple units at NCSU (primarily CCEE and Architecture) and at other universities (US, international). Fall 2011, not selected for funding.

10. Participated in developing a proposal to the Superfund Hazardous Substance Research and Training Program of the National Institute of Environmental Health Sciences (NIEHS). Focus is on health effects associated with trichloroethylene contamination of drinking water at Camp Lejeune. Lead: Jerry LeBlanc, Dept. Head of Environmental & Molecular Toxicology, NCSU (Spring 2010, not selected for funding on first attempt).

11. Developed a joint research proposal with Dr. Howard Weinberg (UNC-CH, ESE) that was selected for funding by the Urban Water Consortium.

12. Gave a presentation about emerging issues and technologies in water and wastewater treatment to the WRRI Advisory Committee, Raleigh, NC, May 13, 2008.

13. Co-organizer of the ACS Symposium "Advances in Adsorption Processes" to be held at the 235th National Meeting & Exposition of the American Chemical Society, New Orleans, LA, April 6-10, 2008.

14. Session co-organizer and invited participant at the NSF-funded Workshop on Models for Sustainable Landfills. March 16-18, 2008, Lewes, DE.

15. Collaborated with Drs. Howard Weinberg (UNC-CH, ESE) and Karl Linden (U. Colorado - Boulder) on a research proposal that was submitted to the American Water Works Association Research Foundation to study disinfection byproduct and assimilable organic carbon formation in UV/H_2O_2 processes. Project was approved for funding and began 1/1/08).

16. IGERT proposal team member (Proposal Title: Globally Engaged Leaders in Innovative Structures & Systems for Climate-Friendly Buildings), Fall 2007

17. Participant at NCSU-EPA Office of Research and Development Meeting to integrate NCSU and EPA research initiatives. April 9, 2007, Research Triangle Park, NC.

18. Invited participant at the NSF-sponsored workshop "Advancing the Quality of Water" to develop future directions in water-quality related research. March 10-12, 2004, Chapel Hill, NC.

19. Collaborated with Dr. Jaap Folmer in the Chemistry Department at NC State University on an NSF-funded project to determine glass transition temperatures for isolated biopolymers and biopolymer composites using differential scanning calorimetry (DSC) to better understand organic contaminant diffusion in municipal solid waste components.

20. Collaborated with Dr. Mark A. Nanny in the School of Civil Engineering & Environmental Science at the University of Oklahoma on an NSF-funded project. Used nuclear magnetic resonance spectroscopy and pyrolysis GC/MS to characterize interactions between xenobiotics and humic substances at the molecular level. In January 2004, a second proposal was submitted with Dr. Nanny, Dr. Morton Barlaz (NCSU, CCEE), and Dr. Neal Blair (NCSU, MEAS) to the biocomplexity program of the National Science Foundation (not

selected for funding).

21. Initiated contact with Dr. JoAnn Burkholder in the Botany Department at NC State University to collaborate on research investigating the removal of algae and algal metabolites from drinking water. Developed a joint proposal that was selected for funding by the American Water Works Association Research Foundation and the Urban Water Consortium.

IV. EXTENSION AND ENGAGEMENT WITH CONSTITUENCIES OUTSIDE THE UNIVERSITY

A. Accomplishments

1. Invited speaker at national and regional workshops, teleconferences, community forums, and other functions
   - Invited panelist at community forums in Wilmington, Brunswick County, and Fayetteville to discuss impacts of GenX on drinking water quality (June 2017 – present)
   - Invited speaker at local seminar series (e.g. Fearrington Village, SAS, 2018)
   - NCAWWA-WEA, Invited Panelist, 2017 Seminar – Wastewater Regulatory Trends and Emerging Issues, Raleigh, NC, June 1, 2017.
   - Chatham Conservation Partners (1,4-dioxane in Pittsboro's drinking water, January 21, 2016).
   - Pittsboro Town Council (1,4-dioxane in Pittsboro's drinking water, September 28, 2015).
   - NC Waterworks Operator Association (hydraulic fracturing, May 6, 2014; UCMR3, August 27, 2014; organics removal, September 23, 2015).
   - Charlotte Water Training Institute, Charlotte, NC, February 5, 2015.
   - Lunch and learn (NCSU, June 5, 2014), West Raleigh Rotary Club (October 17, 2014)
   - Unregulated Data Communications Workshop - Recent North Carolina Research and Associated Data. City of Raleigh, Sept. 16, 2014.
   - Proactive Assessment & Implementation of Future Water Treatment Optimization Goals for Greensboro, Greensboro, NC, May 21, 2014.
   - Bromide Occurrence in the Cape Fear River. Fayetteville Public Utilities Commission, April 10, 2014.
   - Bromide and 1,4-Dioxane in the Cape Fear River Watershed. Triad Area Utilities Meeting, Greensboro, February 5, 2014.
   - AWWA carcinogenic volatile organic contaminants working group. April 30, 2013
   - Triad Area Utilities Meeting. April 11, 2013.
   - NC Public Water Supply Section Disinfection Byproducts Workshop. April 19, 2012.
   - AWWA carcinogenic volatile organic contaminants working group. March 28, 2012.
   - Suffolk County Water Authority, Long Island, NY. June 16, 2011.
   - Hazen & Sawyer Workshop: Emerging Contaminants Research: Implications for Water Treatment, Wastewater Treatment, and Utility Planning. Keynote address. February 17, 2011.
   - NCAWWA-WEA Public Health – Reclaim to Sustain Workshop, March 9, 2010.
   - NC DENR Workshop Public Health & Reclaimed Water, August 27, 2009.
   - Updated NC water utilities on ongoing research in our laboratory. North Carolina Urban Water Consortium Meeting, Charlotte, NC, March 20, 2008.
   - Design Your Own Education Experience (Continuing Education for Practicing Engineers), CCEE Extension Program, Dec. 4, 2007.
   - AWWA Workshop "Advances in the Use of Activated Carbon." Charlotte, NC, November 4, 2007.
   - AWWA Workshop "Advanced Oxidation Technologies in Water Treatment." Charlotte, NC, November 4, 2007.

- Teleconference "Taste & Odor in Drinking Water: Operational Tools and Techniques for Identification and Control." University of North Carolina at Chapel Hill, May 21, 2001.
- Teleconference "Adsorption and Membrane Treatment Technologies: Applications to Water Utilities in North Carolina." University of North Carolina at Chapel Hill, July 24, 1997.

2. Our research on emerging contaminants has been featured by a number of national news services (e.g., PBS News Hour, Washington Post, Chemical & Engineering News, The Intercept) as well as local news outlets (Wilmington Star News, Fayetteville Observer, Carolina Health News, WRAL, WUNC, WHQR). The most impactful article was a June 8, 2017 article by Vaughn Hagerty in the Wilmington Star News, which brought the GenX contamination into the public eye.

3. Assembled stakeholder group consisting of state regulators, drinking water providers, and wastewater discharges to begin to eliminate 1,4-dioxane contamination of drinking water sources in North Carolina. The NCSU research team is meeting regularly with the stakeholder group to provide data updates and to discuss next steps.

4. Our 1,4-dioxane research was featured in an NSF Science Nation video (http://www.nsf.gov/news/special_reports/science_nation/capefearwatershed.jsp). Published May 4, 2015.

5. Provided information to National Public Radio reporter Elizabeth Shogren about 1,4-dioxane occurrence in North Carolina surface water, story aired on March 26, 2014.

6. Taught CE 771 (formerly CE 571) through the Engineering Online program in Fall 1997, Spring 2000, Spring 2002, Spring 2004, Spring 2006, Spring 2008, Spring 2012, Spring 2014, Spring 2016.

7. Taught CE 574 through the Engineering Online program in Fall 2011, Fall 2013, Fall 2015.

B. Program Impacts

Our research on per- and polyfluoroalkyl substances (PFAS) provided the impetus for dramatic decreases in PFAS levels in the drinking water of more than 200,000 residents living in the lower Cape Fear River basin. These improvements resulted in part from voluntary actions by The Chemours company as well as actions mandated by the North Carolina Department of Environmental Quality (DEQ).

As a result of our research on 1,4-dioxane, a working group was formed that includes representatives from DEQ, drinking water providers impacted by 1,4-dioxane, wastewater managers from communities with elevated 1,4-dioxane levels in wastewater, and NCSU researchers. Results of our research informed the working group about the location of 1,4-dioxane discharges and led to the initiation of voluntary source reduction efforts in communities from where 1,4-dioxane originates. In addition, DEQ is considering to revise NPDES discharge permits for municipal wastewater treatment plants in municipalities in

which wastewater contains high levels of 1,4-dioxane. Lowering 1,4-dioxane concentrations in the Cape Fear River watershed is expected to improve the drinking water quality of more than one million North Carolinians.

To maintain licensure, Professional Engineers need to satisfy continuing professional development requirements. By engaging with Professional Engineers at workshops designed to meet continuing professional development requirements, I am able to inform practicing engineers about current research results and technological developments in the water treatment arena. Furthermore, by offering my graduate physico-chemical water treatment course through the Engineering Online program, I am providing opportunities for practicing engineers to further their education.

V. TECHNOLOGICAL AND MANAGERIAL INNOVATION

A. Accomplishments

1. Patent: Very high frequency (VHF) driven atmospheric plasma sources and point of use fertigation of irrigation water utilizing plasma production of nitrogen bearing species. Patent number: 9475710; Inventors: Steven C. Shannon, Detlef Knappe, Brandon Byrns, Daniel Wooten, Alexander Lindsay. October 2016.

2. Collaboration with Hazen and Sawyer, CDM-Smith, Tighe & Bond, and other consulting firms to develop water treatment solutions for PFAS removal.

3. Collaboration with HDR to identify sources of perfluoroalkyl substances in the drinking water supply of the City of Greensboro, NC

4. Collaboration with the Suffolk County Water Authority to assess the effectiveness of granular activated carbon for the removal of perfluoroalkyl substances from ground water

5. Collaboration with Malcolm Pirnie/ARCADIS and the Los Angeles Department of Water and Power to assess treatment options for carcinogenic volatile organic compounds in light of future regulatory scenarios (Spring 2012-present)

6. Research collaborations with drinking water treatment plants across the U.S. (Philadelphia Water Department, Contra Costa Water District, Southern Nevada Water Authority, Central Lake County Joint Action Water Agency, Suffolk County Water Authority, Los Angeles Department of Water and Power, Louisville Water Company, Colorado Springs Utilities, Manatee County Utilities, Kern County Water Authority, and several utilities in North Carolina)

7. Collaboration between the Malcolm Pirnie, Inc. and the University of Colorado, Boulder, to evaluate the effectiveness of activated carbon for the treatment of MTBE-contaminated drinking water wells (Summer 2006, Spring 2007).

8. Prepared reports for AwwaRF that cover such topics as activated carbon selection criteria, algae removal strategies, and MTBE removal strategies.

9. In the Spring 2007 semester, undergraduate and graduate students participated in a study evaluating the effects of switching disinfectants on distribution system water quality for the cities of Raleigh and Cary, NC.

10. I have answered via e-mail and telephone many adsorption- and algae-related questions from water treatment plants and consulting firms across in the US and Canada. I have also provided interested parties with relevant publications of journal articles and conference proceedings.

B. Program Impact

I consider technology transfer an important component of my research and education programs. By engaging with constituencies outside the university, the research results obtained in my research group are being applied by practicing engineers to help improve the quality of drinking water both locally and nationally.

VI. SERVICE TO THE UNIVERSITY AND PROFESSIONAL SOCIETIES

A. Department:

1. Reappointment, Promotion, and Tenure (RPT) Committee Member (Fall 2014 – 2016), Chair (2017 – present).

2. Equipment and Facilities Committee Chair (Fall 2002 – 2012), Equipment and Facilities Committee Member (Fall 1998 – Spring 2002, Fall 2013 - present)
   - Allocated funds among teaching laboratories in the department
   - Prepared annual expenditure reports
   - Prepared "Facilities" section of ABET self-study questionnaire.

3. ABET Assessment Committee for Laboratory Outcomes Member (Fall 2001 - 2015), Chair (Fall 2015 – present)

4. WREE Group Coordinator (Fall 2011 – Spring 2012)

5. Department Head Search Committee member (Spring 2004 – December 2004, Fall 2009 – Spring 2010)

6. Global WaSH Cluster Search Committee member (Fall 2015 – 2018)

7. Awards committee member (Fall 2007 – Spring 2011)

8. EB V/Oval committee member (Fall 2008 – 2010, 2016 – present)

9. Steering committee member for the Department's sustainability task force (Fall 2007 – May 2010)

10. Compact Planning Committee Member (Spring 2007)

11. Search Committee Member for Program Head in Coastal Sustainability and Resilience at the University of North Carolina Coastal Studies Institute (Fall 2007 – Spring 2008)

12. Water Resources and Environmental Engineering Seminar Series Teleconference Coordinator (Fall 1998 - 2004)
    Successfully applied to host distinguished lecturers (AEESP Distinguished Lecturers, Kappe Lecturers) during this time period.

13. Water Resources and Environmental Engineering Faculty Position Search Committees
    Member (Spring 1999)
    Chair (Fall 1997)

14. Open House Committee
    Chair (Fall 1998 – Spring 1999)
        Coordinated Fall 1998 Open House and Spring 1999 Engineering Open House representation of the Civil Engineering Department.
    Member (Fall 1997 - Spring 1998)
    Participant (Spring 1997, Fall 1997, Fall 1999)

15. Flower Fund Chair (Fall 1996 - Summer 1997)

16. Participated in the 2001 "College Welcome"

17. Participated in the Water Resources and Environmental Engineering Spring Symposium (annually starting in Spring 2001)

18. Participated in Air & Waste Management Association Open House (Spring 1998, Spring 1999, Spring 2000)

B. College:

1. Department Representative for Summer Orientation (Spring 1998 – Summer 2000)

2. Occasional guest lecturer for E101 (last in October 2010)

C. NCSU Committees:

1. Technical Advisory Committee member and research advisor for the NCSU Student Chapter of Engineers Without Borders – Advising students, who are working on water supply

projects in Bolivia and Sierra Leone (Fall 2006-present).

2. Faculty Advisor for NC Safewater Student Chapter (2011-present)

3. Mentor for NCSU Global Health Case Competition (April 2010, April 2011).

4. Search committee co-chair for director position of Water Resources Research Institute (March 2008 – March 2009).

5. Mass Spectrometry Users Committee (Spring 1999-2003)

D. State and Regional activities and committee work:

1. NC Science Advisory Board, Member, 2017-present

2. Science Fair Judge at the North Carolina School of Science and Math, Feb. 2012

3. Science Night at Hunter Elementary School. Demonstrated water treatment technologies to K-5 students, April 2010, March 2014.

4. Presented research results from on-line monitoring studies for the detection of algae and bench-scale studies that evaluated the removal of algae from drinking water to members of the North Carolina Urban Water Consortium. February 19, 1998, Greensboro, NC; February 25, 1999, High Point, NC; February 15, 2001, Raleigh, NC. A related presentation was given at a Jordan Lake Stakeholders meeting (January 29, 2004, Greensboro, NC).

5. Provided technical information to the Johnston County Utilities Department (Amanda Bader and Timothy Broome, Smithfield, NC) to improve algae control and treatment strategies (March 2001).

6. Technical review committee member for the expansion/upgrade of the Greenville, NC, water treatment plant.

7. Collaboration with NC water treatment plants on externally funded research projects.

8. Provided technical information to Dave Pritchett of Jamestown Engineering. The information was in regard to the design of an activated carbon adsorption system for the town of Aberdeen, NC, where the pesticide lindane was found in the water supply. Also provided information to the local newspaper on the same topic.

E. National and international activities and committee work:

1. EPA Science Advisory Board, Member, Drinking Water Committee, 2016-present

2. Trustee, AWWA Water Science and Research Division, 2016-present

3. Member, Technical Advisory Council for PFAS Focus Area, The Water Research Foundation, 2017-present.

4. Topic Editor for the Open Access Journal Drinking Water Engineering and Science. January 2011 – present.

5. Associate Editor for Water Science & Technology. March 2009 – February 2013.

6. Member of the Lectures Committee of the Association of Environmental Engineering and Science Professors (AEESP). May 2008 – present. Subcommittee chair for AEESP speaker selection at the AWWA Annual Conference, 2014 – present.

7. Invited member of the American Water Works Association (AWWA) working group for carcinogenic volatile organic compounds. 2011 – 2014.

8. Invited member of the AWWA Publications Award Committee. 2013 – present.

9. External scientific peer reviewer for the State of California Water Resources Control Board Staff Report for "Proposed amendments to statewide water quality control plans for trash." Summer 2014.

10. Co-organizer of the ACS Symposium "Advances in Adsorption Processes" to be held at the 235th National Meeting & Exposition of the American Chemical Society, New Orleans, LA, April 6-10, 2008.

11. Invited member of the American Water Works Association (AWWA) Activated Carbon Standards Committee. The purpose of this committee is to develop and maintain standards and related manuals on adsorptive characteristics of activated carbon for water treatment. June 2003 – present.

    I chaired the Regeneration Standards subcommittee, which was charged with revising AWWA Standard B605 – Standard for Reactivation of Granular Activated Carbon (sent out for balloting in March 2006, revised standard was published by AWWA in 2007).

12. Project Advisory Committee member for the American Water Works Association Research Foundation (AwwaRF). Project Title: Removal of Pesticides and their Degradates by Adsorptive Processes. Peer-review of proposal, project reports and final report. Fall 2006 – Fall 2011. Research team from Technologie-Zentrum Wasser (TZW) in Karlsruhe, Germany.

13. Member of the AWWA Organic Contaminants Research Committee. The purpose of this committee is to assess research results concerning organic contaminant occurrence, behavior, and control in treatment; to point out implications for water supply through seminars and committee reports; and to define research needs. June 2000 – 2005, June 2007 - present.

14. Invited member of the AWWA Particulate Contaminants Research Committee. The purpose of this committee is to identify, evaluate, and communicate research needs, develop ideas for research projects, encourage basic and applied research, and disseminate research results, with a primary focus on particulate contaminants. June 2001 – 2005.

15. Project Advisory Committee member for the American Water Works Association Research Foundation (AWWARF). Project Title: Development of molecular reporters for monitoring *Microcystis* activity and toxicity. Peer-review of project reports and final report. Summer 2001 – 2005. Research team from the University of Tennessee.

16. Project Advisory Committee member for the American Water Works Association Research Foundation (AWWARF). Project Title: Treatability of algal toxins using oxidation, adsorption, and membrane technologies. Peer-review of project reports and final report. Spring 2002 – 2006. Research team: City of Cocoa, FL, and CH2M Hill.

17. Invited Lecturer, Summer School Course on "Presence of Organic Micro-Contaminants in Water: Characterization, Effects And Treatment Alternatives." Environmental Science Doctorate Program, Universidad de Concepcion, Concepcion, Chile, January 4-12, 2010.

18. Invited participant of an international group of researchers to compare experimental and mathematical modeling techniques used to determine the micropore size distribution of carbonaceous adsorbents. October 2002 – 2003.

19. Project Advisory Committee member for AwwaRF. Project Title: The use of oxidants to minimize passage of pathogenic particles through granular media filters. Peer-review of project reports and final report. Summer 2000 – Summer 2003. Research team from Johns Hopkins University.

20. Project Advisory Committee member for AWWARF. Project Title: Characterization of the polar fraction of NOM with respect to DBP formation. Participated in writing of RFP and selection of proposal, peer-review of project reports and final report. Spring 1997 – Spring 2001. Research team members from University of Colorado-Boulder, U.S. Geological Survey, and Metropolitan Water District of Southern California.

21. Peer reviewer for:
    ACS book chapter (Disinfection by-products)
    Adsorption
    AIChE Journal
    Carbon
    Environmental Engineering Science
    Environmental Pollution
    Environmental Science and Technology
    Environmental Science and Technology Letters
    Industrial & Engineering Chemistry Research
    Journal American Water Works Association
    Journal of Colloid and Interface Science
    Journal of Environmental Engineering-ASCE

Journal of Environmental Quality
Journal of Hazardous Materials
Journal of Infrastructure Systems-ASCE
Journal of Material Cycles and Waste Management
Journal of Membrane Science
Journal of Water Supply: Research and Technology-AQUA
Separation Science and Technology
Water Research
Water Science and Technology

I review ~10 manuscripts per year.

22. Peer reviewer for the following funding agencies:
    Water Research Foundation
    Water Reuse Research Foundation
    The Research Council of Norway (2014, 2015)
    National Science Foundation (CAREER panel, CBET Standard Grants Program, Major Research Instrumentation Program)
    U.S. Environmental Protection Agency Grants Program
    U.S. Environmental Protection Agency Graduate Fellowship Program
    U.S. Environmental Protection Agency SBIR Program
    Environmental Research and Education Foundation
    American Chemical Society – Petroleum Research Fund
    US Army Research Office

23. Peer reviewer for the ASCE Environmental Engineering Conference, IWA World Congress, ACS National Meeting.

Exhibit 4

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

SAFER CHEMICALS, HEALTHY FAMILIES et al., *Petitioners,* v. U.S. ENVIRONMENTAL PROTECTION AGENCY et al., *Respondents.* IPC INTERNATIONAL, INC. et al., *Respondents-Intervenors.*	Docket No. 17-72260 Consolidated with Docket Nos. 17-72501, 17-72968, 17-73290, 17-73383, 17-73390

DECLARATION OF VEENA SINGLA, Ph.D.
IN SUPPORT OF PETITIONERS' OPENING BRIEF

I, Veena Singla, declare as follows:

Introduction and Qualifications

1. I am the Associate Director of Science and Policy at the University of California, San Francisco Program on Reproductive Health and the Environment. My research focuses on: indoor environmental quality; understanding exposure pathways for chemicals used in consumer products and building materials; and the mechanisms by which cumulative exposures can lead to adverse health outcomes, especially for vulnerable populations such as workers, pregnant women and young children. The phrase "cumulative exposures" refers to the combination of

exposures to: chemicals during critical windows of development; multiple chemicals; and non-chemical stressors. Through education and communication about relevant research results, I seek to ensure that chemical evaluation methods such as risk assessment and alternatives assessment incorporate current science on exposure pathways, biological susceptibility, the social determinants of health and other relevant fields. I am speaking on behalf of myself in this matter and not as a representative of my employer.

2. I received a Ph.D. from University of California, San Francisco in Developmental and Cellular Biology, and completed a post-doctoral fellowship at Stanford University. My graduate and postdoctoral research focused on how genes control the ways in which cells communicate in vertebrate and invertebrate systems, and the proteins, hormones and small molecules that carry out intra- and inter-cellular signaling. I also studied the developmental origins of disease—the idea that if normal cell signaling during development is disturbed by genetic and/or environmental factors, these perturbations can result in disease and dysfunction later in life.

3. I worked for several years as a Senior Scientist with the Green Science Policy Institute (GSPI), and then served as a Staff Scientist at the Natural Resources Defense Council (NRDC). At GSPI and NRDC, I worked on environmental health science and policy issues relevant to how chemicals in the

environment affect human health. This work included analysis and characterization of flame retardant chemicals in the indoor and built environment, human exposure pathways throughout the chemical lifecycle (i.e., from manufacture, through use and ultimate disposal), and human health hazards. I also completed analysis on the environmental fate, exposure and toxicity properties of the class of halogenated flame retardants which includes hexabromocyclododecane (HBCD), and submitted in-depth scientific and technical comments to the U.S. Environmental Protection Agency (US EPA) on their alternatives assessment evaluation of HBCD.

4. I have extensive experience reviewing data and information from scientific studies and government reports. I have published multiple peer-reviewed articles on the science and policy of flame retardant chemicals in scientific journals. In 2012, I co-authored an article published in Building Research and Information which focused on HBCD.[1]

5. As a recognized expert in the field of human health and the built/indoor environment, I was invited to the first U.S. Green Building Council Summit on Green Building and Human Health in 2012, and to present at a national conference for Occupational and Environmental Medicine Physicians in 2016.

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[1] Babrauskas V, Lucas D, Eisenberg D, Singla V, Dedeo M, Blum A. Flame retardants in building insulation: a case for re-evaluating building codes. Build Res Inf. 2012;40(6):738–55.

6. I have presented invited testimony and/or comments on flame retardant chemicals to the US EPA, the Alaska and California legislatures, the Consumer Product Safety Commission, the International Code Council and the San Francisco Board of Supervisors.

7. By virtue of my education, training, and research, and my knowledge of the pertinent scientific literature, I am considered an expert on the sources of human exposure and effects on human health of the flame retardant HBCD. A more complete description of my education and work experience, as well as a complete list of my publications, is attached to this declaration as Exhibit A.

8. The statements in this declaration are scientifically accurate to the best of my knowledge and ability.

Health Hazards of HBCD

9. HBCD is a manmade chemical containing bromine, carbon and hydrogen. US EPA has identified HBCD as one of the first ten chemicals to undergo risk evaluation under the Toxic Substances Control Act (TSCA). EPA's risk evaluation of HBCD covers three related chemicals, which EPA refers to as the "cyclic aliphatic bromides cluster." This cluster of three chemical includes two Chemical Abstract Services Registry Numbers (CASRN) that identify HBCD[2]; and

[2] HBCD is identified by CASRN 3194-55-6 and 25637-99-4. 3194-55-6 is the most accurate CASRN to use for the HBCD technical mixture. However, it has

one CASRN for a substance with no known uses.[3]

10. Much of the information on the toxicity of HBCD comes from studies in laboratory animals. This is so for at least two reasons. First, it is unethical to intentionally expose human subjects to hazardous substances. Second, data from toxicological studies in whole animals, usually rodents, are highly relevant for predicting a chemical's toxicity in humans. For example, every agent that is known to cause cancer in humans is carcinogenic in animals when adequately tested,[4] and almost one-third of human carcinogens were identified after carcinogenic effects were found in well-conducted animal studies.[5] This almost complete concordance across species is seen because animals and humans have the same genetic, metabolic, and systemic processes that affect the biology of disease induction and progression. It is for this reason that animal tests, conducted in accordance with

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historically also been referred to with the CAS RN 25637-99-4, and is referenced with this number in a variety of regulatory documents and authoritative lists.

[3] US EPA (2017) Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Cyclic Aliphatic Bromide Cluster (HBCD).

[4] IARC Monographs Preamble, http://monographs.iarc.fr/ENG/Preamble/.

[5] Huff J. Predicting chemicals causing cancer in animals as human carcinogens. Occup Environ Med. 2010 Oct;67(10):720.

Maronpot RR, Flake G, Huff J. Relevance of animal carcinogenesis findings to human cancer predictions and prevention. Toxicol Pathol. 2004 Mar-Apr;32 Suppl 1:40-8. Review.

Huff J. Chemicals and cancer in humans: first evidence in experimental animals. Environ Health Perspect. 1993 Apr;100:201-10. Review.

strict guidelines for the welfare and use of research animals, are required by regulatory bodies before new pharmaceutical drugs can be tested in humans.[6] In summary, animal experiments provide information on chemical toxicity that is directly applicable to understanding human disease.

11. HBCD causes liver toxicity in animal studies, including increased liver weight, inflammation and accumulation of fat. This liver toxicity occurs when animals are exposed to HBCD as adults or prenatally (before they are born).[7] These kinds of changes are associated with liver damage and disease such as non-alcoholic fatty liver disease, which can lead to cirrhosis and even liver failure.[8]

12. HBCD causes thyroid toxicity in animal studies, and studies in humans reported associations between HBCD exposures and effects on thyroid

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[6] Page R, Baneux P, Vail D, Duda L, Olson P, Anestidou L, Dybdal N, Golab G, Shelton W, Salgaller M, Hardy C. Conduct, Oversight, and Ethical Considerations of Clinical Trials in Companion Animals with Cancer: Report of a Workshop on Best Practice Recommendations. J Vet Intern Med. 2016 Mar-Apr;30(2):527-35.

Workman P, Aboagye EO, Balkwill F, Balmain A, Bruder G, Chaplin DJ, Double JA, Everitt J, Farningham DA, Glennie MJ, Kelland LR, Robinson V, Stratford IJ, Tozer GM, Watson S, Wedge SR, Eccles SA; Committee of the National Cancer Research Institute. Guidelines for the welfare and use of animals in cancer research. Br J Cancer. 2010 May 25;102(11):1555-77.

[7] US EPA (2017). Scope of the Risk Evaluation for Cyclic Aliphatic Bromides Cluster (hereinafter, "EPA HBCD Scope Document").

[8] Kim, W., 2002. Burden of liver disease in the United States: Summary of a workshop. Hepatology, 36(1), pp.227–242. Available at: http://www.ncbi.nlm.nih.gov/pubmed/12085369.

hormones.[9] Normal thyroid hormone levels and function, especially during the prenatal period, are essential for healthy brain development. Prenatal exposures to chemicals that cause thyroid toxicity can, in effect, scramble thyroid hormone signals, leading to abnormal brain development and health impacts such as loss of cognitive capacity/IQ, attention, learning, memory and motor or coordination problems.[10] In adults, thyroid hormones help maintain normal physiology and metabolism. Perturbations can lead to hyper- or hypo-thyroid disease.

13. HBCD causes neurotoxicity to the developing brain in animal studies. HBCD exposures in young animals caused changes in movement and brain function, and these effects persisted into adulthood. It is believed that thyroid toxicity may be one mechanism by which HBCD causes these effects. HBCD exposure also caused changes in hearing and the functioning of the critical neurotransmitter dopamine.[11] Dopamine is involved in brain processes including response to reward and addiction.

14. HBCD causes reproductive toxicity in animal studies, with reduced fertility and fewer successful pregnancies seen in females.[12]

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[9] EPA HBCD Scope.

[10] Zoeller TR. Environmental chemicals targeting thyroid. Horm. 2010;9(1):28–40.

[11] EPA HBCD Scope Document.

[12] EPA HBCD Scope Document.

15. As stated above, the results of these animal toxicology studies indicate HBCD's toxicity to humans. According to US EPA, HBCD "can reasonably be anticipated to cause developmental and reproductive effects in humans and is highly toxic to aquatic and terrestrial organisms."[13] These health hazards are especially of concern for women of reproductive age, fetuses, infants and young children because the developing reproductive and nervous system is particularly vulnerable to disruption by toxic chemicals.[14] Just as low-level lead exposures that would not harm an adult can be highly poisonous to a child, HBCD exposures during critical windows of a child's brain and reproductive system development

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[13] 81 FR 85440 Nov 28, 2016. Addition of Hexabromocyclododecane (HBCD) Category; Community Right-to-Know Toxic Chemical Release Reporting.

[14] Grandjean P, Bellinger D, Bergman A, Cordier S, Davey- Smith G, Eskenazi B, et al. The Faroes statement: human health effects of developmental exposure to chemicals in our environment. Basic Clin Pharmacol Toxicol 2008;102:73–5.

Crain DA, Janssen SJ, Edwards TM, Heindel J, Ho SM, Hunt P, et al. Female reproductive disorders: the roles of endocrine-disrupting compounds and developmental timing. Fertil Steril 2008;90:911–40.

Diamanti-Kandarakis E, Bourguignon J-P, Giudice LC, Hauser R, Prins GS, Soto AM, et al. Endocrine-Disrupting Chemicals: An Endocrine Society Scientific Statement. Endocr Rev. 2009 Jun;30(4):293–342.

Gore AC, Chappell VA, Fenton SE, Flaws JA, Nadal A, Prins GS, et al. EDC-2: The Endocrine Society's Second Scientific Statement on Endocrine-Disrupting Chemicals. Endocr Rev. 2015 Dec;36(6):E1–150.

Bennett D, Bellinger DC, Birnbaum LS, Bradman A, Chen A, Cory-Slechta DA, et al. Project TENDR: Targeting Environmental Neuro-Developmental Risks The TENDR Consensus Statement. Environ Health Perspect. 2016 Jul 1;124(7).

can be toxic to this susceptible population at levels that may not harm other populations.

HBCD is a Persistent, Bioaccumulative and Toxic Chemical

16. According to US EPA, "[B]ased on the available bioaccumulation and persistence data, EPA has determined that HBCD should be classified as a persistent, bioaccumulative, and toxic (PBT) chemical…"[15] Persistence in the environment means that HBCD does not break down after it is released into the environment. Bioaccumulation means that HBCD builds up in wildlife and people, accumulating to higher and higher levels in the body as it moves up the food chain. Because HBCD is harmful to the health of living organisms, as described above, it is considered toxic.

17. HBCD is designated as a persistent, bioaccumulative and toxic chemical (also knowns as a PBT or POP, persistent organic pollutant) by the Stockholm Convention[16] and US EPA's Toxics Release Inventory.[17]

Sources and Uses of HBCD

[15] 81 FR 85440 Addition of Hexabromocyclododecane (HBCD) Category; Community Right-to-Know Toxic Chemical Release Reporting.

[16] Stockholm Convention. SC-6/13: Listing of hexabromocyclododecane

[17] 81 FR 85440 Addition of Hexabromocyclododecane (HBCD) Category; Community Right-to-Know Toxic Chemical Release Reporting

18. The total volume of HBCD manufactured or imported in the U.S. in 2015 was between 1 and 10 million pounds. It is added as a flame retardant to building materials, electronics, floor coverings, furniture, and fabrics.[18]

19. The major use of HBCD (90% of production volume) is in building insulation, specifically expanded and extruded polystyrene materials.[19] Existing buildings in the U.S. contain 66-132 million pounds of HBCD.[20]

20. HBCD is a semi-volatile organic chemical which is also used additively in plastic materials and on textiles. For example, HBCD is added to plastic cases (high-impact polystyrene (HIPS)) used for televisions, computers, printers and other electronics; and as a coating on fabrics including furniture upholstery and curtains.[21]

21. HBCD can migrate out of products and partition into air and dust in

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[18] EPA HBCD Scope Document.

[19] Babrauskas V, Lucas D, Eisenberg D, Singla V, Dedeo M, Blum A. Flame retardants in building insulation: a case for re-evaluating building codes. Build Res Inf. 2012;40(6):738–55.

EPA HBCD Scope Document.

[20] Safer Chemicals, Healthy Families et al. Comments to the U.S. Environmental Protection Agency (EPA) on the Scope of its Risk Evaluation for the TSCA Work Plan Chemicals: CYCLIC ALIPHATIC BROMIDE CLUSTER or HEXABROMOCYCLODODECANE (HBCD). March 15, 2017. https://healthybuilding.net/uploads/files/saferchemicals-hbcd.pdf

[21] Stubbings WA, Harrad S. Extent and mechanisms of brominated flame retardant emissions from waste soft furnishings and fabrics: A critical review. Environ Int. 2014 Oct;71:164–75.

the occupied spaces of buildings.[22] HBCD is found in the dust of homes, commercial buildings, vehicles, airplanes, schools, daycares and college dormitories.[23]

22. HBCD is released to air, water, and land during the chemical's manufacture, processing, and use in products, as well as with the recycling and disposal of such products.[24] Environmental monitoring studies find significantly

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[22] Weschler, C.J. & Nazaroff, W.W., 2008. Semivolatile organic compounds in indoor environments. Atmospheric Environment, 42(40), pp.9018–9040.

Rauert C, Lazarov B, Harrad S, Covaci A, Stranger M. A review of chamber experiments for determining specific emission rates and investigating migration pathways of flame retardants. Atmos Environ. 2014;82:44–55.

[23] US EPA, 2015. TSCA Work Plan Chemical Problem Formulation and Initial Assessment: Cyclic Aliphatic Bromides Cluster Flame Retardants. Office of Chemical Safety and Pollution Prevention, EPA Document# 743-D1-5001, pg. 26

Harrad, S. et al., 2010. Dust from U.K. primary school classrooms and daycare centers: The significance of dust as a pathway of exposure of young U.K. children to brominated flame retardants and polychlorinated biphenyls. Environmental Science and Technology, 44(11), pp.4198–4202.

Harrad, S. & Abdallah, M.A.-E., 2011. Brominated flame retardants in dust from UK cars – Within-vehicle spatial variability, evidence for degradation and exposure implications. Chemosphere, 82(9), pp.1240–1245.

Dodson RE, Rodgers KM, Carey G, Cedeno Laurent JG, Covaci A, Poma G, et al. Flame Retardant Chemicals in College Dormitories: Flammability Standards Influence Dust Concentrations. Environ Sci Technol. 2017 Apr 13;acs.est.7b00429.

Mitro SD, Dodson RE, Singla V, Adamkiewicz G, Elmi AF, Tilly MK, et al. Consumer Product Chemicals in Indoor Dust: A Quantitative Meta-analysis of U.S. Studies. Environ Sci Technol. 2016;acs.est.6b02023.

[24] EPA HBCD Scope Document.

higher levels of HBCD in the air, water, sediment, soil and animals near facilities that manufacture, process (including recycling) and dispose of HBCD and/or products containing HBCD.[25]

23. Because HBCD is persistent in the environment, it is subject to long-range transport and is found in the air of urban and remote environments; surface and ocean water; soil, sediment and sewage sludge; in marine and freshwater fish; and in animals including marine mammals, birds and their eggs.[26]

24. Environmental releases result in contamination of food with HBCD. HBCD is found in peanut butter, fish, poultry and pork products purchased at U.S. grocery stores.[27] HBCD also contaminates traditional foods such as wild fish and

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[25] Covaci A, Gerecke AC, Law RJ, Voorspoels S, Kohler M, Heeb N V, et al. Hexabromocyclododecanes (HBCDs) in the environment and humans: A review. Environ Sci Technol. 2006 Jun;40(12):3679–88.

Zhu H, Zhang K, Sun H, Wang F, Yao Y. Spatial and temporal distributions of hexabromocyclododecanes in the vicinity of an expanded polystyrene material manufacturing plant in Tianjin, China. Environ Pollut. 2017 Mar;222:338–47.

Stubbings WA, Harrad S. Extent and mechanisms of brominated flame retardant emissions from waste soft furnishings and fabrics: A critical review. Environ Int. 2014 Oct;71:164–75.

[26] Law RJ, Covaci A, Harrad S, Herzke D, Abdallah MA-E, Fernie K, et al. Levels and trends of PBDEs and HBCDs in the global environment: Status at the end of 2012. Environ Int. 2014 Apr;65:147–58.

Stockholm Convention Persistent Organic Pollutants Review Committee. (2010) Risk profile on hexabromocyclododecane. UNEP/POPS/POPRC.6/13/Add.2

[27] Schecter A, Szabo DT, Miller J, Gent TL, Malik-Bass N, Petersen M, et al. Hexabromocyclododecane (HBCD) Stereoisomers in U.S. Food from Dallas, Texas. Environ Health Perspect. 2012 May 31;120(9):1260–4.

marine mammals relied on by arctic, indigenous and other communities for some portion of their diets.[28]

Human Exposure to HBCD

25. Because HBCD is not bound to the materials to which it is added and because it is semi-volatile, HBCD migrates out of products into indoor air and dust.[29] It can migrate in three ways: (1) as a vapor or gas, with subsequent inevitable attachment to house dust; (2) physical abrasion of particles from the treated product directly into dust; and (3) direct contact between the surface of the treated product and dust.[30]

Schecter A, Haffner D, Colacino J, Patel K, Päpke O, Opel M, et al. Polybrominated diphenyl ethers (PBDEs) and hexabromocyclodecane (HBCD) in composite U.S. food samples. Environ Health Perspect. 2010 Mar;118(3):357–62.

[28] de Wit CA, Herzke D, Vorkamp K. Brominated flame retardants in the Arctic environment - trends and new candidates. Sci Total Environ. 2010;408(15):2885–918.

Arctic Monitoring and Assessment Program. (2016) AMAP Assessment 2016: Chemicals of Emerging Arctic Concern.

Suk WA, Avakian MD, Carpenter D, Groopman JD, Scammell M, Wild CP. Human exposure monitoring and evaluation in the Arctic: The importance of understanding exposures to the development of public health policy. Environ Health Perspect. 2004;112(2):113–20.

[29] EPA HBCD Scope Document.

[30] Rauert C, Lazarov B, Harrad S, Covaci A, Stranger M. A review of chamber experiments for determining specific emission rates and investigating migration pathways of flame retardants. Atmos Environ. 2014;82:44–55.

Rauert C, Kuribara I, Kataoka T, Wada T, Kajiwara N, Suzuki G, et al. Direct contact between dust and HBCD-treated fabrics is an important pathway of source-to-dust transfer. Sci Total Environ. 2016 Mar;545–546:77–83.

26. This HBCD-contaminated dust moves away from treated products through the air and settles down, coating the surface of floors, carpets and indoor objects. Studies find ubiquitous HBCD contamination of indoor environments including cars, homes, schools, and other buildings; across studies, HBCD is detected in 92-100% of indoor dust samples.[31] Because people spend more than 90% of their time indoors in the U.S.,[32] indoor exposures are particularly important for the general population.

27. HBCD enters the bodies of adults and children in the general population when people: breathe in contaminated air; touch products containing HBCD or put such products in their mouths; touch, breathe in, or accidentally ingest contaminated indoor dust; drink contaminated water; and eat contaminated food.

28. Young children who crawl, play on the floor, and put their hands in their mouths have greater exposure to contaminated indoor dust compared to adults, and their exposure to HBCD via dust would be elevated.[33] HBCD also

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[31] Mitro SD, Dodson RE, Singla V, Adamkiewicz G, Elmi AF, Tilly MK, et al. Consumer Product Chemicals in Indoor Dust: A Quantitative Meta-analysis of U.S. Studies. Environ Sci Technol. 2016;acs.est.6b02023.

[32] Klepeis, N. E.; Nelson, W. C.; Ott, W. R.; Robinson, J. P.; Tsang, A.M.; Switzer, P.; Behar, J. V.; Hern, S. C.; Engelmann, W. H. The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants. J. Exposure Anal. Environ. Epidemiol. 2001, 11 (3), 231–252.

[33] US EPA. Exposure Factors Handbook.

contaminates breastmilk, and diet is the major source of HBCD exposure for infants.[34, 35] Further, recent testing found HBCD in children's car seats,[36] and data indicates that baby products are an important contributor to children's exposure for other flame retardants.[37] Children have 3-15 times higher levels of exposure to other kinds of flame retardant chemicals compared to adults; because the exposure pathways are similar, children are also at risk for higher exposures to HBCD.[38]

29. Subsistence populations rely on natural resources to provide some portion of their diet. These populations, including many indigenous communities, consume significantly more and different types of fish compared to the general

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[34] EPA HBCD Scope Document.

[35] Fromme H, Becher G, Hilger B, Völkel W. Brominated flame retardants – Exposure and risk assessment for the general population. Int J Hyg Environ Health. 2015;219(1):1–23.

[36] Ecology Center 2016. Children's Car Seat Study 2016- Report. Available: http://www.ecocenter.org/healthy-stuff/pages/childrens-car-seat-study-2016-report

[37] Hoffman K, Butt CM, Chen A, Limkakeng AT, Stapleton HM. High Exposure to Organophosphate Flame Retardants in Infants: Associations with Baby Products. Environ Sci Technol. 2015 Dec 15;49(24):14554–9.

[38] Lunder S, Hovander L, Athanassiadis I, Bergman Å. Significantly Higher Polybrominated Diphenyl Ether Levels in Young U.S. Children than in Their Mothers. Environ Sci Technol. 2010 Jul 1;44(13):5256–62.

Butt CM, Congleton J, Hoffman K, Fang M, Stapleton HM. Metabolites of Organophosphate Flame Retardants and 2-Ethylhexyl Tetrabromobenzoate in Urine from Paired Mothers and Toddlers. Environ Sci Technol. 2014 Sep 2;48(17):10432–8.

population, and thus their exposures to HBCD via diet would be elevated.[39]

30. The environmental monitoring studies cited above find significantly higher levels of HBCD in the air, water, sediment, soil and animals near facilities that historically or currently produce, process, recycle or dispose HBCD or HBCD-containing products. Given these higher levels, it is likely that communities near such facilities would have elevated exposures to HBCD. Because HBCD is persistent in the environment, HBCD levels around such facilities would be expected to remain elevated even if the facility no longer produces or processes HBCD.

31. Because HBCD is persistent and bioaccumulative, environmental releases will manifest in continued contamination of water, crops, livestock and wild foods.[40] These sources will result in ongoing human exposures, likely for many decades into the future. Evidence from other persistent and bioaccumulative chemicals demonstrates that after production bans, human exposure initially

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[39] US EPA. Exposure Factors Handbook, Chapter 10: Intake of Fish and Shellfish.

Suk WA, Avakian MD, Carpenter D, Groopman JD, Scammell M, Wild CP. Human exposure monitoring and evaluation in the Arctic: The importance of understanding exposures to the development of public health policy. Environ Health Perspect. 2004;112(2):113–20.

[40] Harrad S, Diamond ML. New Directions: Exposure to polybrominated diphenyl ethers (PBDEs) and polychlorinated biphenyls (PCBs): Current and future scenarios. Atmos Environ. 2006 Feb;40(6):1187–8.

declines, but then remains steady because of ongoing exposures from existing products, diet, etc.[41]

32. Workers who manufacture or process HBCD, or handle HBCD-containing products such as building materials, would have additional sources of HBCD exposure through skin contact and inhalation of contaminated air and dust. As buildings with HBCD-containing insulation are remodeled, rehabilitated and demolished, existing insulation that is recycled or landfilled will lead to worker exposures and environmental contamination.[42] For example, a 2012 study in Environmental Science and Technology found that cutting building insulation boards releases microscopic particles containing HBCD that could be inhaled deep into the lung.[43] Furniture, electronics and other products containing HBCD will

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[41] Zota AR, Linderholm L, Park J-S, Petreas M, Guo T, Privalsky ML, et al. Temporal Comparison of PBDEs, OH-PBDEs, PCBs, and OH-PCBs in the Serum of Second Trimester Pregnant Women Recruited from San Francisco General Hospital, California. Environ Sci Technol. 2013 Oct 15;47(20):11776–84.

Parry E, Zota AR, Park J-S, Woodruff TJ. Polybrominated diphenyl ethers (PBDEs) and hydroxylated PBDE metabolites (OH-PBDEs): A six-year temporal trend in Northern California pregnant women. Chemosphere. 2018;195:777–83.

[42] Babrauskas V, Lucas D, Eisenberg D, Singla V, Dedeo M, Blum A. Flame retardants in building insulation: a case for re-evaluating building codes. Build Res Inf. 2012;40(6):738–55.

[43] Zhang H, Kuo Y-Y, Gerecke AC, Wang J. Co-release of hexabromocyclododecane (HBCD) and Nano- and microparticles from thermal cutting of polystyrene foams. Environ Sci Technol. 2012 Oct;46(20):10990–6.

also contribute to worker exposures and environmental contamination as they are recycled and disposed.[44] In this way, workers may be exposed to HBCD through their handling of HBCD-containing products at the end of the products' life. Additionally, workers would have elevated exposures to HBCD because on-the-job exposures occur in addition to the HBCD exposures they experience at home and via diet, etc., that are also experienced by the general population.

Risks from Aggregate and Cumulative Exposures

33. In general, the equation ***Hazard x Exposure = Risk*** is a simplified representation of the risk assessment calculation. In US EPA's risk evaluation of HBCD under the Toxic Substances Control Act, HBCD's health hazards will be considered in conjunction with the dose, or exposure, of HBCD received into the body to calculate the total health risk presented by HBCD. Therefore, if the hazard or the exposure is understated, then the risk will be understated.

34. It is not possible to determine, *a priori*, which use(s) of a chemical carry the highest risk(s) without a comprehensive examination of the chemical's hazards and exposures. For example, the volume of a chemical put into a particular use is often used as a surrogate to estimate potential exposure—the higher-volume the use, the higher the potential exposure. But this simplistic assumption does not

[44] Stubbings WA, Harrad S. Extent and mechanisms of brominated flame retardant emissions from waste soft furnishings and fabrics: A critical review. Environ Int. 2014 Oct;71:164–75.

always hold true. In the case of HBCD, 90% of the production volume is used in building insulation, and 10% of production volume is used in other applications including electronics cases and textiles. The simplistic assumption would be that building insulation uses contribute most to human exposures for the general population. But if we consider indoor HBCD exposures, data shows that actually, furniture and electronics contribute significantly to indoor levels of HBCD through the migration pathways described above.[45] Specifically, HBCD levels in dust were significantly higher: near a television containing HBCD compared to other areas in a room;[46] and in college dormitories adhering to stricter flammability standards that result in more furniture being treated with flame retardants, including HBCD.[47] In fact, the highest levels of HBCD ever measured in indoor dust in the U.S. were found in college dormitories, an exposure that would not be accounted

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[45] Rauert C, Lazarov B, Harrad S, Covaci A, Stranger M. A review of chamber experiments for determining specific emission rates and investigating migration pathways of flame retardants. Atmos Environ. 2014;82:44–55.

Rauert C, Kuribara I, Kataoka T, Wada T, Kajiwara N, Suzuki G, et al. Direct contact between dust and HBCD-treated fabrics is an important pathway of source-to-dust transfer. Sci Total Environ. 2016 Mar;545–546:77–83.

[46] Harrad S, Abdallah MAE, Covaci A. Causes of variability in concentrations and diastereomer patterns of hexabromocyclododecanes in indoor dust. Environ Int. 2009 Apr;35(3):573–9.

[47] Dodson RE, Rodgers KM, Carey G, Cedeno Laurent JG, Covaci A, Poma G, et al. Flame Retardant Chemicals in College Dormitories: Flammability Standards Influence Dust Concentrations. Environ Sci Technol. 2017 Apr 13;acs.est.7b00429.

for if only exposures from the highest volume use were considered.

35. HBCD enters people's bodies from many sources including indoor and outdoor environments, products, water and food. All of these sources contribute to the total dose, or exposure, of HBCD in the body. Excluding any known source of exposure—for example from food—will underestimate total exposure, and thus underestimate the total risk of HBCD.

36. Exposures can be also underestimated by failing to consider the actual duration of the exposure. For example, children would experience almost continuous HBCD exposure throughout the day as they move between home, cars and school or daycare. Assuming children are exposed to HBCD only 8 hours a day would underestimate their exposure and underestimate risk. Further, multiple exposure spikes over time (known as "repeated dose" exposures) can have a sensitizing effect, resulting in a more severe reaction to a second, third or fourth exposure than occurred to the first. If the effects of multiple exposures are not considered, risk would be underestimated.

37. Underestimation of exposure is especially consequential for the sub-populations of women of reproductive age, fetuses, infants and young children who have greater biological susceptibility to HBCD toxicity, and thus could experience harm at lower levels of HBCD exposure than other populations.

Conclusion

38. HBCD is a persistent, bioaccumulative and toxic chemical that presents threats to human and environmental health. A person's risk of suffering harm from exposure to HBCD depends on the totality of a person's exposures from all sources, including from existing products *in situ* in buildings and disposal of such products. If EPA fails to account for all sources and uses, risk to populations including workers, communities, subsistence populations, women, fetuses, infants and children would be underestimated. In that case, one or more of these populations could suffer health harms as a result of HBCD exposures, including but not limited to liver damage, infertility, decreased IQ, and attention problems.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 3, 2018.

Veena Singla

Exhibit A

to the Declaration of Veena Singla, Ph.D.
in Support of Petitioners' Opening Brief

VEENA SINGLA, PH.D.

120 Wetmore St. #5
San Francisco, CA 94108
(469) 236-5549
veena.singla@gmail.com

EDUCATION

From	To	Institution	Degree	Major	PhD Advisor
08/1997	05/2001	University of California, Berkeley	B.S.	Chemistry	
09/2003	09/2010	University of California, San Francisco	PhD	Cell Biology	Jeremy Reiter
04/2011	05/2012	Stanford University	Postdoctoral Fellowship		

OTHER POSITIONS

From	To	Institution	Position	Department
09/2008	12/2011	University of San Francisco	Adjunct Professor	Biology
04/2010	08/2010	KQED Public Media for Northern California	Education Intern	QUEST
05/2012	10/2013	Green Science Policy Institute	Senior Scientist	
01/2014	6/2017	Natural Resources Defense Council (NRDC)	Staff Scientist	Health and Environment Program

HONORS AND AWARDS

Year	Name	Organization
2001	High honors (Summa cum laude)	UC Berkeley Chemistry Department
2004	Graduate Research Fellowship	National Science Foundation
2006	Richard Fineberg Memorial Teaching Award	UC San Francisco
2008	Scholarship recipient	Phi Beta Kappa Association of Northern California
2009	Outstanding poster presentation	California Academy of Sciences Evolution Symposium

PROFESSIONAL ORGANIZATIONS

From	To	Organization
07/2014	Present	American Chemical Society

SERVICE TO PROFESSIONAL ORGANIZATIONS

From	To	Organization	Role
01/2013	Present	Californians for Toxic-Free Fire Safety Coalition	Co-lead

09/2014	Present	Healthy Babies, Bright Futures Integrated Flame Retardant Campaign	Steering Committee member

INVITED PRESENTATIONS

Category	Year	Organization	Role	Type
International	2007	FASEB Biology of Cilia and Flagella International Meeting	Speaker	Podium
Regional	2011	Green Campus Energy Efficiency Summit	Speaker	Podium
National	2014	14th Annual Workshop on Brominated and Other Flame Retardants	Speaker	Podium
National	2014	Green Chemistry Clearinghouse	Speaker	Panel
National	2014	American Chemical Society National Meeting	Speaker	Panel
National	2014	Health and Environmental Funders Network meeting	Speaker	Panel
National	2015	Green Chemistry Clearinghouse	Speaker	Panel
National	2015	SXSW Eco	Speaker	Panel
Other	2016	UCSF Grand Rounds	Speaker	Podium
National	2016	Toxic Substances in the Workplace and the Environment Conference	Speaker	Podium
Regional	2016	Environmental Chemistry Laboratory Seminar Series, California Department of Toxic Substances Control	Speaker	Podium
National	2016	Society of Environmental Journalists Annual Conference	Speaker	Panel

PROFESSIONAL DEVELOPMENT ACTIVITIES
UCSF Becoming an Effective Science Teacher (BEST) and Teaching Apprenticeship Program (TAP) courses

SERVICE ACTIVITIES SUMMARY
My service activities have focused on providing career development mentorship for graduate students interested in science policy and communication.

Category	From	To	Organization	Role
UCSF Campuswide	04/2010	04/2011	UCSF Green Campus (Alliance to Save Energy)	Team leader
Other University	2011	2011	Stanford Splash! Education Program	Class leader
UCSF Campuswide	09/2010	2014	UCSF Graduate Student Internships for Career Exploration	Alumnus advisor- Participate in roundtables/ panels at bi-annual events
UCSF Campuswide	09/2014	Present	UCSF Motivating INformed Decisions (MIND) Program	Mentor (conduct about 1 informational interview/ month)

COMMUNITY AND PUBLIC SERVICE

From	To	Organization	Role
1999	2001	UC Berkeley Disabled Students Program	Tutor
1999	2001	South Berkeley YMCA	Volunteer
2008	2009	Golden Gate Parks Conservancy	Volunteer
2011	2011	California Academy of Sciences	Volunteer

CONTRIBUTIONS TO DIVERSITY
As manager of NRDC's internship program, I expanded our recruitment efforts to include more diverse Bay Area schools such as Touro University and University of San Francisco (USF), both majority minority institutions. I have guest lectured at Touro every year since 2013 and we hosted our first USF intern in 2017.

TEACHING SUMMARY
I am an experienced educator with significant curriculum development, evaluation and teaching experience. I use an evidence-based approach to teaching drawing from research in science education, cognitive science and psychology. I have experience working with diverse student populations, including minority, low-income and disabled.

FORMAL TEACHING

University	Year	Class	Department	Role
UCSF	2004-05	Biochemistry Fundamentals and Cancer Block	Medical School	Teaching assistant
University of San Francisco	2008	Introductory Biology	Biology	Laboratory teaching assistant
University of San Francisco	2009	Advanced Genetics	Biology	Lecturer and curriculum development
University of San Francisco	2010	"The Science of Life" Biology for non-majors	Biology	Lecturer and Laboratory Instructor, curriculum development
Stanford University	2011-12	Core Molecular Biology Laboratory (Bio 44X)	Biology	Laboratory instructor, curriculum development, and evaluation

MENTORING SUMMARY
I have served as the primary mentor for undergraduate, master's, and pre-doctoral students as well as physician fellows in internships ranging from 1 month- 1 year.

Student	Year	Current Position	Mentor Type	Role
Nichole Johnston (Undergraduate intern)	2013	Graduate student, Biochemistry, Yale University	Research, project, career mentor	Full-time mentor, 3 months, meetings once a week

Student	Year	Current Position	Mentor Type	Role
Biruk Tammru (MPH candidate)	2014	Design Researcher at Gobee Group	Research, project, career mentor	Full-time mentor, 3 months, meetings once a week
Raj Puri (MD fellow)	2014		Project mentor	Full-time mentor, 1 month, meetings once a week
Jacqueline Levere (Undergraduate intern)	2014		Research, project, career mentor	Full-time mentor, 3 months, meetings once a week
Lee Ann Hill	2015	Associate, Environmental Health at PSE Healthy Energy	Research, project, career mentor	Full-time mentor, 3 months, meetings once a week
Yi Krystal Lin (MD fellow)	2015	Physician, The Permanente Medical Group	Research and project mentor	Full-time mentor, 1 month, meetings once a week
Anna Reade (predoctoral student)	2016	Senate Fellow, California Council on Science and Technology	Research, project, career mentor	Full-time mentor, 3 months, meetings once a week
Shuchi Aggarwal (MD fellow)	2016	Resident Physician in Occupational and Environmental Medicine at UCSF	Project mentor	Full-time mentor, 1 month, meetings once a week
Alex Shi (MPH candidate)	2016		Research, project, career mentor	Full-time mentor, 3 months, meetings once a week
Lucia Ruiz (MPH candidate)	2017		Research, project, career mentor	Full-time mentor, 3 months, meetings once a week
Monica Kaitz (MD fellow)	2016-17		Research and project mentor	Meetings once a month; one publication completed and another in progress

RESEARCH AND CREATIVE ACTIVITIES SUMMARY

I have developed, secured funding for, and managed strategic new research initiatives on chemical exposures in the indoor environment and vulnerable populations. These include multiple collaborative, interdisciplinary research projects at the intersection of environmental health and policy.

At Green Science Policy Institute, I led a multi-disciplinary team of fire scientists (from Lawrence Berkeley National Laboratory and industry) and environmental health and policy experts (from UC Berkeley and non-governmental organizations (NGOs)) to publish the first-of-its-kind paper on flammability standards, building codes and toxic chemicals in the built environment.

Recently, I led a team of seven scientists investigating consumer product chemicals in the indoor environment, bringing together academic, NGO, and medical researchers from George Washington University, Silent Spring Institute, Harvard School of Public Health and UCSF. I provided the vision and funding for the project, resulting in a publication in a leading journal and extensive media coverage.

RESEARCH AWARDS

Category	Role	Funding Source	Date	Total Direct Costs	Project Description
Past	Project lead	NRDC Science Center	2015-16	$50,000	A quantitative meta-analysis of consumer product chemicals in U.S. indoor dust
Past	Project co-lead	Healthy Babies, Bright Futures	2015	$10,000	Risk assessment of flame retardant chemical clusters
Past	Project co-lead	Ziering Family Foundation	2015	$10,000	Risks of the pesticide chlorpyrifos
Past	Project co-lead	Healthy Babies, Bright Futures	2016	$15,000	Evaluation of flame retardant chemical data
Current	Project co-lead	Healthy Babies, Bright Futures	2017	$15,000	Evaluation of flame retardant chemical data

PEER-REVIEWED PUBLICATIONS

1. Corbit, K.C., Aanstad, P., **Singla, V.**, Norman, A.R., Stainier, D.Y., Reiter, J.F. (2005) Vertebrate Smoothened functions at the primary cilium. *Nature*. 437 (7061): 1018-1021
2. **Singla, V.** and Reiter, J.F. (2006) The primary cilium as the cell's antenna: signaling at a sensory organelle. *Science*. 313 (5787): 629-633
3. **Singla, V.**, Hunkapiller, J., Santos, N., Seol, A.D., Norman, A.R., Wakenight, P., Skarnes, W.C., Reiter, J.F. (2010) Floxin, a resource for genetically engineering mouse ESCs. *Nature Methods*. Jan;7(1):50-2.
4. **Singla, V.**, Romaguera-Ros, M., Garcia-Verdugo, J.M., Reiter, J.F. *Ofd1*, a human disease gene, regulates the length and distal structure of centrioles. (2010) *Developmental Cell* Mar 16; 18(3): 410-424.
5. Hunkapiller, J., **Singla, V.**, Seol, A.D., Reiter, J.F. (2011) The ciliogenic protein Oral-Facial-Digital 1 regulates the neuronal differentiation of embryonic stem cells. *Stem Cells and Development*. May;20(5):831-41
6. Babrauskas, V., Lucas, D., Eisenberg, D., **Singla, V.**, Dedeo, M., Blum, A. (2012). Flame retardants in building insulation: a case for re-evaluating building codes. *Building Research & Information*, 40(6), 738–755. doi:10.1080/09613218.2012.74453
7. Brownell, S. E., Hekmat-Scafe, D.S., **Singla, V.**, Seawell, P.C., Conklin-Imam, J.F., Eddy, S.L., Stearns, T., Cyert, M.S. (2015) A high-enrollment course-based undergraduate research experience improves student conceptions of scientific thinking and ability to interpret data. *CBE Life Sciences Education*, 14(2), 14-ar21. doi: 10.1187/cbe.14-05-0092
8. Hekmat-Scafe, D.S., Brownell, S.E., Seawell, P.C., Malladi, S., Conklin-Imam, J.F., **Singla, V.**, Bradon, N., Cyert, M.S., Stearns, T. (2016) Using yeast to determine the functional consequences of mutations in the human p53 tumor suppressor gene: An introductory course-based undergraduate research experience in molecular and cell biology. *Biochemistry and Molecular Biology Education*. doi: 10.1002/bmb.21024
9. Mitro, S.D., Dodson, R.E., **Singla, V.**, Adamkiewicz, G., Elmi, A.F., Tilly, M.K., Zota, A.R. (2016) Consumer product chemicals in indoor dust: A quantitative meta-analysis of U.S. studies. *Environmental Science & Technology*. doi: 10.1021/acs.est.6b02023

10. Zota, A.R., **Singla, V.**, Adamkiewicz, G., Mitro, S.D., and Dodson, R.E. (2017) Reducing chemical exposures at home: opportunities for action. *Journal of Epidemiology and Community Health*. (In press)

CONFERENCE ABSTRACTS

1. Poster presentation (2009) Evolution Symposium, **California Academy of Sciences**, San Francisco, CA. *Awarded prize for outstanding poster presentation*
2. Poster presentation. (2008) **American Society for Cell Biology Meeting**, San Francisco, CA.
3. Poster presentation (2005) **EMBL Workshop on Centrosomes and Spindle Pole Bodies**, Heidelberg, Germany.
4. Poster presentation (2005) **Society for Developmental Biology Meeting**, San Francisco, CA.

State of Rhode Island and Providence Plantations

DEPARTMENT OF ATTORNEY GENERAL
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(401) 274-4400 - TDD (401) 453-0410

Peter F. Kilmartin, Attorney General

August 15, 2018

Via Electronic Filing

EPA-HQ-OPPT-2016-0736 (Asbestos)
EPA-HQ-OPPT-2016-0741 (1-Bromopropane)
EPA-HQ-OPPT-2016-0723 (1,4-Dioxane)
EPA-HQ-OPPT-2016-0733 (Carbon Tetrachloride)
EPA-HQ-OPPT-2016-0735 (Cyclic Aliphatic Bromide Cluster, also known as HBCD)
EPA-HQ-OPPT-2016-0742 (Methylene Chloride)
EPA-HQ-OPPT-2016-0743 (N-Methylpyrrolidone (NMP))
EPA-HQ-OPPT-2016-0725 (Pigment Violet 29)
EPA-HQ-OPPT-2016-0732 (Tetrachloroethylene, also known as Perchloroethylene)
EPA-HQ-OPPT-2016-0737 (Trichloroethylene (TCE))
EPA-HQ-OPPT-2018-0210 (Application of Systemic Review in TSCA Risk Evaluations)

Charlotte Bertrand, Acting Principal Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460-0001

Re: Notice of Availability on Problem Formulations for the Risk Evaluations to be Conducted Under the Toxic Substances Control Act for Asbestos, 1-Bromopropane, 1,4 Dioxane, Carbon Tetrachloride, Cyclic Aliphatic Bromide Cluster, also known as HBCD, Methylene Chloride, N-Methylpyrrolidone (NMP), Pigment Violet 29, Tetrachloroethylene, also known as Perchloroethylene, and Trichloroethylene (TCE) and General Guiding Principles to Apply Systematic Review in TSCA Risk Evaluations (83 Fed. Reg. 26,998 (Jun. 11, 2018))

Dear Acting Principal Deputy Assistant Administrator Bertrand:

Rhode Island Attorney General Peter F. Kilmartin hereby submits this comment letter, joining the August 3, 2018 comment letter from the Attorneys General of Massachusetts, California, Hawaii, Maine, Maryland, New Jersey, New York, Oregon, Vermont, Washington, and the District of Columbia regarding the U.S. Environmental Protection Agency's ("EPA") problem formulations of the risk evaluations for the ten chemical substances (the "Initial Ten TSCA Chemicals") that are the subject of EPA's initial chemical risk evaluations required under the

Frank R. Lautenberg Chemical Safety for the 21st Century Act (the "Lautenberg Act"), amending the Toxic Substances Control Act (TSCA). A copy of that letter is attached hereto as "Exhibit A."

Thank you for this opportunity to submit these comments on this important matter, which will help to protect the health of millions of Americans.

PETER F. KILMARTIN
Attorney General of Rhode Island

/s/ Gregory S. Schultz

GREGORY S. SCHULTZ
Special Assistant Attorney General
Rhode Island Department of Attorney General
150 South Main Street
Providence, RI 02903
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Exhibit A

THE ATTORNEYS GENERAL OF MASSACHUSETTS, CALIFORNIA, HAWAII, MAINE, MARYLAND, NEW JERSEY, NEW YORK, OREGON, VERMONT, WASHINGTON, AND THE DISTRICT OF COLUMBIA

August 3, 2018

Via Electronic Filing

EPA-HQ-OPPT-2016-0736 (Asbestos)
EPA-HQ-OPPT-2016-0741 (1-Bromopropane)
EPA-HQ-OPPT-2016-0723 (1,4-Dioxane)
EPA-HQ-OPPT-2016-0733 (Carbon Tetrachloride)
EPA-HQ-OPPT-2016-0735 (Cyclic Aliphatic Bromide Cluster, also known as HBCD)
EPA-HQ-OPPT-2016-0742 (Methylene Chloride)
EPA-HQ-OPPT-2016-0743 (N-Methylpyrrolidone (NMP))
EPA-HQ-OPPT-2016-0725 (Pigment Violet 29)
EPA-HQ-OPPT-2016-0732 (Tetrachloroethylene, also known as Perchloroethylene)
EPA-HQ-OPPT-2016-0737 (Trichloroethylene (TCE))
EPA-HQ-OPPT-2018-0210 (Application of Systemic Review in TSCA Risk Evaluations)

Charlotte Bertrand, Acting Principal Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460-0001

Re: Notice of Availability on Problem Formulations for the Risk Evaluations to be Conducted Under the Toxic Substances Control Act for Asbestos, 1-Bromopropane, 1,4 Dioxane, Carbon Tetrachloride, Cyclic Aliphatic Bromide Cluster, also known as HBCD, Methylene Chloride, N-Methylpyrrolidone (NMP), Pigment Violet 29, Tetrachloroethylene, also known as Perchloroethylene, and Trichloroethylene (TCE) and General Guiding Principles to Apply Systematic Review in TSCA Risk Evaluations (83 Fed. Reg. 26,998 (Jun. 11, 2018))

Dear Acting Principal Deputy Assistant Administrator Bertrand:

The Attorneys General of Massachusetts, California, Hawaii, Maine, Maryland, New Jersey, New York, Oregon, Vermont, Washington, and the District of Columbia appreciate this opportunity to comment on the U.S. Environmental Protection Agency's ("EPA") problem formulations of the risk evaluations for the ten chemical substances (the "Initial Ten TSCA Chemicals")[1] that are the subject of EPA's initial chemical risk evaluations required under the

[1] *See* 15 U.S.C. § 2605(b)(2)(A), requiring EPA promptly to initiate risk evaluations on ten chemical substances drawn from the agency's *TSCA Work Plan for Chemical Assessments: 2014 Update*,

Frank R. Lautenberg Chemical Safety for the 21st Century Act (the "Lautenberg Act"),[2] amending the Toxic Substances Control Act (TSCA).[3]

In its notice dated June 11, 2018, EPA requested comments on the problem formulation documents for the Initial Ten TSCA Chemicals (the "Problem Formulations") to assist the agency in developing its draft risk evaluations for these chemical substances.[4]

The Attorneys General submit the following comments for EPA's consideration as EPA proceeds with its risk evaluations of the Initial Ten TSCA Chemicals.[5]

SUMMARY OF COMMENTS

The undersigned Attorneys General support the goal that motivated the Lautenberg Act amendments to TSCA, signed into law on June 22, 2016: the goal of reforming TSCA to remove obstacles that had prevented EPA from playing a more robust role in protecting public health and the environment from toxic chemicals.

Unfortunately, the Problem Formulations are antithetical to that purpose. EPA takes the position that TSCA authorizes the agency to consider in its risk evaluation a mere subset of the uses for which the chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed. That interpretation would result in EPA's risk evaluations being woefully incomplete by ignoring significant exposure pathways for the chemical substances. This unlawfully restrictive application of TSCA ignores that Congress intended for EPA to assess a chemical in its entirety, based on all identifiable conditions of use, including ongoing and legacy uses, like the ubiquitous continued use of notoriously hazardous asbestos, in its risk evaluations. For this reason, the Problem Formulations would produce deeply flawed risk evaluations that would make it impossible for EPA to fulfill its statutory mandate under Section 6 of TSCA of establishing requirements for the Initial Ten TSCA Chemicals to ensure that none of the chemical substances presents "an unreasonable risk of injury to health or the environment."[6]

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https://www.epa.gov/sites/production/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf, and publish the list within 180 days after June 22, 2016. The Initial Ten TSCA Chemicals are: Asbestos, 1-Bromopropane, 1,4-Dioxane, Carbon Tetrachloride, Cyclic Aliphatic Bromide Cluster, also known as HBCD, Methylene Chloride, N-Methylpyrrolidone (NMP), Pigment Violet 29, Tetrachloroethylene, also known as Perchloroethylene, and Trichloroethylene (TCE). *See Designation of Ten Chemical Substances for Initial Risk Evaluations Under the Toxic Substances Control Act*, 81 Fed. Reg. 91,927 (Dec. 19, 2016).

[2] Pub. L. No. 114—182, 130 Stat. 448 (Jun. 22, 2016).

[3] 15 U.S.C. § 2601, et seq.

[4] *See* 83 Fed. Reg. 26,998 (Jun. 11, 2018). EPA also solicited comments on its "*Application of Systematic Review in TSCA Risk Evaluations*," dated May 2018, which these comments do not address.

[5] The framework rules that EPA issued to implement the amendments to TSCA, Section 6, including with respect to the procedures for conducting risk evaluations, are currently under review in the Ninth Circuit. *See Safer Chemicals, Healthy Families, et al., v. EPA, et al.*, Docket No. 17-72260 (9th Cir.).

[6] *See* 15 U.S.C. § 2605(a).

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We thus urge EPA to issue revised Scopes of the Risk Evaluation, which the Problem Formulations are meant to refine,[7] for each of the Initial Ten TSCA Chemicals to address the agency's fatally flawed approach to identifying the conditions of use as that term is understood under TSCA and to ensure that the data EPA considers in the process satisfies TSCA's "best available science" standards. Given the well-documented hazards of many of the Initial Ten TSCA Chemicals, we fully expect that after conducting appropriate risk evaluations, EPA will impose new protective restrictions, and in some cases bans, for the chemical substances in this group.

These comments proceed as follows. In Part I, we describe TSCA's requirements for the risk evaluations. In Part II, we provide a summary of our states' interests with regard to the risk evaluations. In Part III, we offer analysis supporting our call for EPA to reconsider its approach to its conditions of use characterizations and to ensure that data consistent with TSCA's requirements are considered in the risk evaluation process. Finally, we suggest an appropriate risk evaluation path forward that will satisfy Congress's mandate under TSCA that EPA act to eliminate unreasonable risks of injury to health or the environment, without consideration of costs or other non-risk factors, including an unreasonable risk to potentially exposed or susceptible subpopulations.

I. Risk Evaluations for the Initial Ten TSCA Chemicals

Under TSCA, as amended, EPA is required to prioritize chemical substances for regulatory review and then assess the risks posed by the chemicals identified as priorities. Risk is a function of hazard and exposure, and to evaluate the risks posed by a chemical as TSCA requires it is necessary to consider the full range of exposures. However, in the Problem Formulations EPA has, without basis in law or fact, eliminated from its risk evaluation process many significant sources of chronic exposure to these toxic chemical substances.

Section 6 of TSCA requires EPA systematically to prioritize for risk evaluation, and to evaluate the potential risks presented by, the manufacture, processing, distribution in commerce, use, or disposal of chemical substances or mixtures.[8] Within 180 days of enactment of the 2016 TSCA amendments, that is by December 19, 2016, EPA was required to begin risk evaluations on ten chemical substances drawn from the agency's *TSCA Work Plan for Chemical Assessments: 2014 Update* (the "2014 TSCA Work Plan Update")[9] and to publish the list of such

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[7] 83 Fed.Reg. 26,998 at 26,999.

[8] 15 U.S.C. § 2605.

[9] In 2012, EPA identified 83 chemicals for assessment as part of its chemical safety program. According to EPA, the screening process for identifying the chemicals was based on a combination of hazard, exposure (including via uses), and persistence and bioaccumulation characteristics, and in developing the 2014 Update the agency continued to use the process, which focused on chemicals that meet one or more of the following factors: (i) potential concern for children's health (for example, because of reproductive or developmental effects); (ii) neurotoxic effects; (iii) persistent, bioaccumulative and toxic; (iv) probable or known carcinogens; (v) used in children's products or in products to which children may be highly exposed; and (vi) detected in biomonitoring programs. *See TSCA Work Plan for Chemical Assessments: 2014 Update*, https://www.epa.gov/sites/production/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf.

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chemical substances during the 180-day period.[10] On December 19, 2016, EPA designated the Initial Ten TSCA Chemicals for risk evaluation: Asbestos, 1-Bromopropane, 1,4-Dioxane, Carbon Tetrachloride, Cyclic Aliphatic Bromide Cluster (also known as HBCD), Methylene Chloride, N-Methylpyrrolidone (NMP), Pigment Violet 29, Tetrachloroethylene (also known as Perchloroethylene), and Trichloroethylene (TCE).[11]

Under TSCA, Section 6(b)(4)(A), EPA is required to conduct a risk evaluation for each of the Initial Ten TSCA Chemicals, and for chemicals later designated as "high-priority," to determine whether the

> . . . chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of cost or other nonrisk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant to the risk evaluation by the Administrator, under the conditions of use.[12]

And under TSCA, Section 6(b)(4)(D), EPA was required to publish the scope of the risk evaluation to be conducted for each of the Initial Ten TSCA Chemicals within six months after the initiation of the risk evaluation.[13]

On July 7, 2017, EPA published its Notice of Availability for the Scopes of the Risk Evaluations To Be Conducted for the First Ten Chemical Substances Under the Toxic Substances Control Act.[14] Under TSCA, those scopes must include the hazards, exposures, conditions of use, and the potentially exposed or susceptible subpopulations the Administrator expects to consider in his or her analysis.[15] Thereafter, EPA published the subject Problem Formulations in the Federal Register on June 11, 2018,[16] with the Problem Formulations being said to function to refine the earlier-published scope documents.[17]

II. The Interests of the Participating States

Our states have a significant interest in ensuring that the risk evaluations for the Initial Ten TSCA Chemicals are conducted in accordance with TSCA. The Initial Ten TSCA

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[10] 15 U.S.C. § 2605(b)(2)(A).

[11] *See Designation of Ten Chemical Substances for Initial Risk Evaluations Under the Toxic Substances Control Act*, 81 Fed. Reg. 91,927 (Dec. 19, 2016).

[12] 15 U.S.C. § 2605(b)(4)(A).

[13] 15 U.S.C. § 2605(b)(4)(D).

[14] 82 Fed. Reg. 31,592 (Jul. 7, 2017).

[15] *See* 15 U.S.C. § 2605(b)(4)(D).

[16] 83 Fed. Reg. 26,998 (Jun. 11, 2018).

[17] *Id.* at 26,999.

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Chemicals were drawn from the agency's 2014 TSCA Work Plan Update,[18] as required by TSCA,[19] and were selected based on their hazard and potential exposure, as well as other factors such as persistence and bioaccumulation.[20] For example, asbestos is a known carcinogen, with acute and chronic toxicity associated with inhalation exposures; tetrachloroethylene (also known as perchloroethylene or perc) is a probable human carcinogen with high reported releases to the environment; and n-methylpyrrolidone (NMP) has high reported releases to the environment and is associated with reproductive toxicity.[21] The potential for substantial harm to public health and the environment associated with the Initial Ten TSCA Chemicals resulted in their being chosen as the first candidates for risk evaluation. Thus, the consequences for our states' residents of a federal failure to identify those risks and to regulate accordingly may be dire, with the potential for even greater risk to susceptible subpopulations, where the failure to perform a full analysis may have the most severe adverse impact.

As evidenced by the following overview of actions by many of the participating states and the District of Columbia, the unreasonable risks to human health and the environment that the Initial Ten TSCA Chemicals pose justifies governmental response. In fact, it is just such health- and environment-protective regulation at the federal level that informed the 2016 amendments to TSCA.

Additionally, the data listed below that demonstrates the prevalence of the Initial Ten TSCA Chemicals in our states further confirms the states' significant interest in ensuring that EPA implements TSCA as it was revised by the Lautenberg Act: to eliminate "unreasonable risk of injury to health or the environment" from the "intended, known, or reasonably foreseen" manufacturing, processing, distribution in commerce, use, or disposal of chemicals.[22]

Massachusetts

Under the Massachusetts Toxics Use Reduction Act, G.L. c. 21I ("TURA"), large-quantity chemical users in the Commonwealth are required to report annually on their use of toxic chemicals and conduct toxics use reduction planning every two years. Each of the Initial Ten TSCA Chemicals, with the exception of Cyclic Aliphatic Bromide Cluster, also known as HBCD, and Pigment Violet 29, are on the TURA chemicals list and are subject to TURA's requirements.[23] Moreover, the TURA program may designate "Higher" or "Lower Hazard Substances" within the larger TURA list of Toxic or Hazardous Substances. If a chemical is designated as a Higher Hazard Substance (HHS) under TURA, the thresholds for reporting for

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[18] *See TSCA Work Plan for Chemical Assessments: 2014 Update,* https://www.epa.gov/sites/production/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf.

[19] *See* 15 U.S.C. § 2605(b)(2)(A).

[20] 81 Fed. Reg. 91,927 (Dec. 19, 2016), at 91,928–91,929.

[21] *Id.*

[22] 15 U.S.C. § 2602(4) and § 2605(b)(4)(A).

[23] That HBCD and Pigment Violet 29 are not listed does not represent any judgment of the toxicity of these chemicals. It simply means that they have not been taken up for consideration and possible addition to the TURA list and they may later be added to the TURA list.

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those chemicals are lowered. To date, the TURA program has designated 14 chemicals or chemical categories as HHS.[24] Four of the Initial Ten TSCA Chemicals are designated as HHS under TURA: trichloroethylene, perchloroethylene, 1-bromopropane, and methylene chloride.[25]

In Massachusetts, the Toxics Use Reduction Institute ("TURI"), created under TURA, Section 6, and the Massachusetts Office of Technical Assistance and Technology ("OTA"), its partner agency, work with Massachusetts businesses to reduce the use of toxic chemicals in the state. TURI and OTA are engaged in on-going work to help Massachusetts businesses and communities reduce their use of toxic solvents including trichloroethylene, perchloroethylene, methylene chloride, 1-bromopropane, and n-methylpyrrolidone, as well as helping businesses adopt safer alternatives to toxic flame retardants, among other efforts. This work to assist Massachusetts businesses and communities complements other regulatory activities within the Commonwealth to protect workers, communities and the environment from these and other toxic chemicals.

Massachusetts also comprehensively regulates asbestos through a set of overlapping state and delegated federal programs involving multiple state agencies. From 2011–2015, the U.S. Centers for Disease Control and Prevention (CDC) reports there were 441 new cases of mesothelioma in Massachusetts, resulting in 366 deaths.[26] Asbestos exposure is the known cause of mesothelioma.

- The Massachusetts Department of Environmental Protection ("MassDEP") is authorized by the Massachusetts Clean Air Act, M.G.L. c. 111, §§ 142A-O, and the federal Clean Air Act, 42 U.S.C. § 7401, et seq., to prevent air pollution by regulating asbestos handling, transport, and disposal.
- MassDEP requires notice and remediation of releases of asbestos to the environment as a hazardous material under the state's "superfund" law, M.G.L. c. 21E.
- MassDEP also regulates the disposal of asbestos under the Massachusetts Solid Waste Management Act, M.G.L. c. 111, § 150A.
- The Massachusetts Department of Labor Standards ("DLS") ensures worker safety in Massachusetts by licensing asbestos-related work and requiring the use of proper work practices and safety equipment pursuant to M.G.L. c. 149.
- DLS is also delegated authority under the Asbestos Hazard Emergency Response Act, 15 U.S.C. § 2641, et seq., to regulate asbestos in schools for the safety of the school community.

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[24] *See Designation of TURA Higher and Lower Hazard Substances in Massachusetts*, MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS (2016), https://www.turi.org/TURI_Publications/TURI_Chemical_Fact_Sheets/Higher_and_Lower_Hazard_Substances.

[25] That six of the Initial Ten TSCA Chemicals are not designated as HHS in Massachusetts does not mean that the TURA program considers them to be less toxic than others. Rather, it means that those chemicals have not yet been addressed under this regulatory process.

[26] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

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- The Massachusetts Office of the Attorney General is empowered to initiate litigation to enforce these state statutes and to seek court orders for compliance and civil penalties.

The Attorney General also conducts other work to encourage the safe use and public awareness of asbestos, such as leading a multi-party stakeholder effort to create a comprehensive online public database of asbestos information about Massachusetts schools in response to a report by the Office of Senator Edward J. Markey identifying a lack of this information nationally.

California

Because of the significant harm to human health and the environment that the Initial Ten TSCA Chemicals pose, California has implemented regulatory measures including, but not limited to: prohibiting the sale, supply, and manufacturing for use of specified consumer product categories that contain any of the following compounds: TCE, PCE, or methylene chloride;[27] regulating exposure to asbestos in construction work,[28] general industry,[29] shipyards[30] and prohibiting sale of brake pads with asbestiform fibers above .1% weight.[31] California has proposed regulation of methylene chloride in varnish and paint strippers under its Safer Consumer Products regulations (Cal. Code Regs., tit. 22, § 69501, et seq.). With the exception of HBCD and Pigment Violet 29, each of the Initial Ten TSCA Chemicals is listed as either a carcinogen and/or reproductive toxin under California's Safe Drinking Water and Toxic Enforcement Act of 1986 known as "Proposition 65."[32] The adverse impacts to California these substances cause are further demonstrated by the following:

- From 2011–2015, the CDC reports there were 1,716 new cases of mesothelioma in California, resulting in 1,318 deaths.[33] Asbestos exposure is the known cause of mesothelioma.
- There have been at least two deaths in California caused by exposure to paint strippers containing methylene chloride since 2012.[34]
- There are 37 sites in California with TCE contamination that have been or are on the National Priorities List (NPL) under the Comprehensive Environment Response, Compensation and Liability Act (CERCLA), 29 with PCE contamination, 6 with asbestos contamination, 10 with 1,4-dioxane contamination,

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[27] California Code of Regulations ("Cal. Code Regs."), tit. 17, §§ 93111(d), 94509(m), and 94552(e).

[28] *Id.* tit. 8, § 1529.

[29] *Id.* tit. 8, § 5208.

[30] *Id.* tit. 8, § 8358.

[31] California Health and Safety Code ("Health & Saf. Code"), § 25250.51.

[32] *Id.* § 25249.5, et seq.

[33] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[34] *See* https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/Pages/MeClLinks.aspx (last accessed July 27, 2018).

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36 with methylene chloride contamination, and 25 with carbon tetrachloride contamination. [35]

- In 2016, the most current Toxic Release Inventory (TRI) reporting year, a combined total of 2,124,369 pounds of 1,4-dioxane, asbestos, carbon tetrachloride, NMP, PCE and TCE was reported as having been disposed of or released in California.[36]

Maine

Under the Maine Priority Toxic Chemical Use Reduction law, 38 Maine Revised Statutes ("M.R.S.") §§ 2331-2330, and corresponding rule, 06-096 Code of Maine Rules ("CMR") ch. 82, commercial and industrial facilities using more than 1,000 pounds/year of a priority toxic chemical listed in Maine's rule, 06-096 CMR ch. 81, must report their usage of the chemical and must develop a pollution prevention plan, which must be updated every two years. Maine has identified five chemicals as priority toxic chemicals under this law, two of which are on the list of Initial Ten TSCA Chemicals—perchloroethylene and trichloroethylene.

Maine regulates several of the chemicals on the list of Initial Ten TSCA Chemicals as hazardous matter and hazardous substances.[37] In addition, Maine regulates control technology for dry cleaners using perchloroethylene.[38]

Maine also comprehensively regulates asbestos abatement activities to ensure safe working conditions pursuant to its asbestos law, 38 M.R.S. §§ 1271-1284, and its corresponding rule, 06-096 CMR ch. 425, and the disposal and transportation of asbestos under its Solid Waste Management Rules, 06-096 CMR ch. 401 (disposal); 06-096 CMR ch. 411 (transportation). Additionally, in Maine, all sellers of residential real property are required to disclose the presence of asbestos or the prior removal of asbestos to potential buyers.[39] From 2011–2015, the CDC reports there were 128 new cases of mesothelioma in Maine, resulting in 107 deaths.[40]

Moreover, the Maine Department of Environmental Protection has been delegated by the U.S. Environmental Protection Agency to conduct periodic Asbestos Hazard Emergency Response Act (AHERA) compliance inspections in Maine's non-profit school systems.

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[35] Data reflected by searching California for all active NPL sites for these contaminants via EPA's Superfund Enterprise Management System at https://cumulis.epa.gov/supercpad/CurSites/srchsites.cfm.

[36] Data reflected by searching the TRI for California as to release or disposal of Initial Ten TSCA Chemicals via EPA's TRI Explorer at https://iaspub.epa.gov/triexplorer/tri_release.chemical (last accessed August 2, 2018).

[37] 38 M.R.S. § 1362(1); 06-096 CMR ch. 800, 801.

[38] 06-096 CMR ch. 125.

[39] 33 M.R.S. § 173(4).

[40] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

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Maryland

Maryland regulates the manufacture, sale, use, and disposal of chemicals—including some of the substances to be addressed in EPA's initial risk evaluations—in a variety of ways. For instance, businesses engaged in the removal or encapsulation of asbestos may do so only pursuant to a license issued by the Maryland Department of the Environment—which, in turn, has prescribed strict procedures governing such activities.[41] From 2011–2015, the CDC reports there were 258 new cases of mesothelioma in Maryland, resulting in 207 deaths.[42]

More broadly, the Department regulates the disposal of hazardous waste, including substances included in EPA's Initial Ten TSCA Chemicals.[43] Maryland Department of the Environment regulations generally prohibit the sale, supply, offer for sale, or manufacture for use in the state of adhesives, cleaners, and other products containing methylene chloride, perchloroethylene, or trichloroethylene.[44] Additionally, the Maryland Secretary of Health may declare a substance to be "hazardous material" and establish labeling requirements or, where appropriate, ban the substance.[45] The Secretary has exercised this authority by incorporating by reference Parts 1500 and 1505 of Title 16 of the Code of Federal Regulations (implementing the Federal Hazardous Substances Act).[46] The Secretary is authorized to inspect facilities where hazardous material may be manufactured, processed, packaged, or stored, as well as vehicles used to transport or hold such material.[47]

New York

New York regulates the manufacture, sale, use and disposal of chemicals, including some at issue in the Problem Formulations, in a variety of ways. For example, New York has a de facto ban on the use of 1-bromopropane, also known as n-propyl bromide, in dry cleaning.[48] New York will not issue an Air Facility Registration to any facility proposing to use that chemical as an alternative dry cleaning solvent as it is not an approved alternative solvent. New York has spent millions of dollars cleaning up tetrachloroethylene (perc) and trichloroethylene at hazardous waste sites. To help remove 1,4-dioxane from drinking water on Long Island, New York has conditionally approved a new treatment technology.[49] As regards asbestos, New York

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[41] *See* Annotated Code of Maryland ("Md. Code Ann."), Env't tit. 6 subtit. 4; Code of Maryland Regulations ("Md. Code Regs.") tit. 26, subtit. 11, ch. 21.

[42] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[43] Md. Code Regs. tit. 26, subtit. 13.

[44] Md. Code Regs. 26.11.32.08 to .09.

[45] Md. Code Ann., Health § 22-502.

[46] Md. Code Regs. 10.19.02.01.

[47] Md. Code Ann., Health § 22-506.

[48] *See* NEW YORK STATE DEP'T OF ENVTL. CONSERVATION, *Approved Alternative Solvents for Dry Cleaning, available at* http://www.dec.ny.gov/chemical/72273.html.

[49] *See* Governor's Office, "*Governor Cuomo Announces Conditional Approval For New Drinking Water Treatment Technology in Suffolk County*," *available at* https://www.governor.ny.gov/news/governor-cuomo-announces-

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has a number of regulatory programs in place: the Department of Health certifies and trains employees who perform asbestos abatement; the Department of Labor regulates asbestos abatement and removal projects; and the Department of Environmental Conservation regulates the transportation and disposal of asbestos waste.[50]

Oregon

Oregon has adopted, and is considering, several state-specific statutes and regulations to manage the impacts of toxic and hazardous pollutants that encompass the majority of the Initial Ten TSCA Chemicals. These programs include:

- Asbestos emissions, disposal, licensing and certification requirements.[51] From 2011–2015, the CDC reports there were 245 new cases of mesothelioma in Oregon, resulting in 223 deaths.[52]
- Air toxics permits and benchmarks for industrial facilities.[53] In addition, Oregon is currently in the process of developing new rules on industrial air emissions that would regulate emissions based on health risks to neighboring communities. The proposed rules will regulate emissions of hundreds of chemicals, including several of the Initial Ten TSCA Chemicals: asbestos, 1-bromopropane, carbon tetrachloride, 1,4 dioxane, tetrachloroethylene, and trichloroethylene. Oregon is relying on federal guidance and expertise to help define potential health risks for communities that are exposed to these emissions and to ensure that communities are protected from cumulative risks from other potential exposure pathways.
- Toxics Use and Hazardous Waste Reduction planning requirements,[54] which apply to large and small quantity generators of hazardous waste and Toxic Release Inventory reporters.
- State cleanup and remedial actions for hazardous substances,[55] and separate rules for dry cleaning facilities with perchloroethylene (tetrachloroethylene).[56] In addition, legacy contamination from industrial sites is still a potential source of exposure to several of the Initial Ten TSCA Chemicals. The Oregon Health Authority's Environmental Health Assessment Program evaluates potential public health risks from contaminated sites across our state. In the last year alone, the program has been asked to evaluate public health risks from sites where

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conditional-approval-new-drinking-water-treatment-technology-suffolk.

[50] *See* New York State Department of Environmental Conservation, Asbestos Regulation, at https://www.dec.ny.gov/chemical/8791.html.

[51] Oregon Revised Statutes (ORS) 468A.700 to 468A.760 and Oregon Administrative Rules (OAR) ch. 340, div. 248).

[52] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[53] OAR ch. 340, div. 246.

[54] ORS 465.003 to 465.037 and OAR 340-135.

[55] ORS 465.200 through 465.455 and 465.900, and OAR ch.340, div. 122.

[56] ORS 465.200 and 465.500 through 465.548, and OAR 340-124.

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environmental monitoring projects detected at least one of the Initial Ten TSCA Chemicals, including 1,4 dioxane, carbon tetrachloride, methylene chloride, tetrachloroethylene, and/or trichloroethylene.

- Oregon adopted the Toxic Free Kids Act in 2015, requiring manufacturers of children's products to report the presence of specific chemicals of concern in products sold in Oregon.[57] Several of the Initial Ten TSCA Chemicals are being reported in that program, including 1,4 dioxane, methylene chloride, tetrachloroethylene, and hexabromocyclododecane.[58] Oregon relies on information from federal agencies to evaluate potential health risks of chemicals of concern for children, to identify new chemicals of concern to add to the reporting list, and to help address cumulative risks from these chemicals through other routes of exposure.

Across all of these programs, Oregon has compiled data documenting the presence of the majority of the Initial Ten TSCA Chemicals in various environmental media. EPA must consider the full scope of impacts from these chemicals in states like Oregon in determining the scope of TSCA risk evaluations for the Initial Ten TSCA Chemicals.

Washington

The Washington State Waste Reduction Act ("WRA") was enacted "[i]n the interest of protecting the public health, safety, and the environment[.]"[59] Under the WRA, any person generating over 2,640 pounds of hazardous waste annually is required to "prepare a plan for the voluntary reduction of the use of hazardous substances and the generation of hazardous wastes."[60] The Revised Code of Washington 70.95C.020 provides that both dangerous waste and extremely hazardous waste "shall specifically include those wastes designated as dangerous by rules adopted pursuant to chapter 70.105 RCW."[61] Accordingly, pursuant to RCW 70.105, the Washington State Department of Ecology ("Ecology") has designated five of the Initial Ten TSCA Chemicals as dangerous wastes subject to voluntary reduction plans.[62]

Within Ecology, the WRA establishes an office of waste reduction (also referred to as Ecology).[63] Ecology's duties, in part, include encouraging the reduction of hazardous waste use, coordinating with all state agency programs to provide technical assistance, and coordinating public education programs on waste reduction.[64] Additionally, Ecology provides technical

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[57] ORS 431A.250 through 431A.280.

[58] OAR 333-016-2020.

[59] Revised Code of Washington ("RCW") 70.95C.010.

[60] RCW 70.95C.200(1); Washington Administrative Code ("WAC") 173-305-015.

[61] RCW 70.95C.020(3), (5).

[62] *See* WAC 173-303-090(8), -9903, -9904, -9905 (listing 1,4-dioxane, carbon tetrachloride, methylene chloride, tetrachloroethylene, and trichloroethylene).

[63] RCW 70.95C.030(1).

[64] *See* RCW 70.95C.030.

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assistance in preparing plans pursuant to WRA in an effort to reduce the use of such dangerous wastes.[65]

In the context of hazardous waste and toxics reduction, Washington State has additional statutes that authorize Ecology to regulate asbestos and many Initial Ten TSCA Chemicals due to their associated harms to public health and the environment.[66] For example, Washington's Better Brakes Law mandates a phase out of asbestos in brake friction material that is sold, or offered for sale, in Washington State.[67] From 2011–2015, the CDC reports there were 463 new cases of mesothelioma in Washington State, resulting in 394 deaths.[68] In addition, under Washington's Children's Safe Products Act, manufacturers whose products contain certain chemicals, like N-Methylpyrrolidone, methylene chloride, tetrachloroethylene, and HBCD, must annually report to Ecology.[69] With respect to children's products containing HBCD, a flame retardant, Ecology is required to evaluate "potential impacts on human health and the environment resulting from . . . [chemical] exposure" when developing policies and recommendations.[70]

Ecology collaborates with many state agencies, such as the Washington State Department of Health, and works with industries and environmental stakeholders, to identify chemicals that pose the highest risks to human health and the environment. Thereafter, Ecology develops and enforces policies, toxic chemical regulations, and plans to reduce or eliminate the use of toxic chemicals.

District of Columbia

The District of Columbia's Hazardous Waste Management Act includes provisions for toxic chemical source reporting and reduction.[71] Businesses identified by the Standard Industrial Classification (SIC) as the largest generators or within the top 25% of all hazardous waste generators within the District, or that release a toxic chemical subject to regulation are required to file an annual Toxic Release Inventory (TRI) Form R for each TRI-listed chemical it manufactures, processes or otherwise uses in quantities above the threshold reporting quantity.[72] In addition, reporting facilities must prepare and submit a toxic chemical source reduction plan which must be updated every four years.[73] TRI-listed chemicals include the following toxic substances included in the Initial Ten TSCA Chemicals: trichloroethylene, 1-bromopropane and n-methylpyrrolidone.

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[65] *Id.*

[66] *See* RCW 70.285, .240.

[67] RCW 70.285; WAC 173-901-010.

[68] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[69] RCW 70.240; *see also* WAC 173-334-130 (list of chemicals of high concern to children).

[70] RCW 70.240.035(3), .010(8).

[71] Code of the District of Columbia ("D.C. Code"), Chapter 13, Subchapter II.

[72] D.C. Code § 8-1317.

[73] D.C. Code § 8-1318.

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The District also regulates the removal and abatement of asbestos through its own licensing and permitting requirements to ensure the safe removal and disposal of asbestos-containing material and the safety of asbestos abatement workers and the surrounding community.[74]

III. Analysis

A. The Problem Formulations Reflect a Fatally Flawed Conditions-of-Use Approach

Under Section 6(b)(4)(A) of TSCA, EPA conducts risk evaluations to "determine whether a chemical substance presents an unreasonable risk of injury to health or the environment . . . under the conditions of use."[75] And the term "conditions of use" is defined as "the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."[76]

So, under TSCA, EPA must conduct risk evaluations to determine whether a "chemical substance" presents an unreasonable risk under the circumstances under which that substance is "intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."[77] The plain language of the statue requires EPA to evaluate the risks of each chemical substance identified for evaluation under all circumstances for which exposures can be anticipated, including the so-called "legacy" uses, which clearly are circumstances under which these chemicals are "known . . . to be . . . used or disposed of."[78] Without basis in law or fact, the risk evaluation scheme reflected in the Problem Formulations fails to evaluate the risks for each chemical under all circumstances for which exposures can be anticipated and by failing to do so frustrates TSCA's purposes by ignoring exposures and underestimating risks posed by the chemical substances. For example, where the hazard posed by a chemical may relate to multiple exposure pathways, ignoring one of these pathways may result in underestimating the total, cumulative risk posed by the chemical. Such underestimation may adversely impact determinations of risk to certain populations, including those who are particularly exposed or sensitive to the chemical's adverse effects. Therefore, any risk evaluations conducted under the risk evaluation scheme reflected in the Problem Formulations cannot satisfy EPA's mandate under TSCA.

1. EPA is Ignoring Highly Risky "Legacy Uses," Putting Public Health and the Environment in Grave Peril

In the Problem Formulations, EPA has eliminated from its analysis many of the most important sources of chronic exposure to these toxic chemicals by defining away these exposure

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[74] 20 D.C. Municipal Regulations § 20-800.

[75] 15 U.S.C. § 2605(b)(4)(A).

[76] Section 3(4) of TSCA; 15 U.S.C. § 2602(4).

[77] *Id.*

[78] *Id.*

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pathways through the agency's unjustified narrowing of the conditions of use it will consider. Most significant, perhaps, is EPA's irrational decision to eliminate so-called "legacy" uses from its evaluations. This willful ignorance is both unlawful and patently dangerous based on the hazards both to people and the environment presented by unaccounted-for exposures to any of the Initial Ten TSCA Chemicals.

The most glaring and egregious example of this dereliction of EPA's statutory obligations comes in the Problem Formulation for asbestos. Asbestos is a known carcinogen and there is no safe level of exposure to this highly toxic material ubiquitous in our built environment.[79] The potential for harm posed by asbestos is universally recognized and addressing its risks was a priority in reforming TSCA:

> Asbestos, for example, is one of the most harmful chemicals known to humankind, and it takes 15,000 lives a year. It is linked to a deadly form of lung cancer called mesothelioma. People can breathe in these fibers deep into their lungs where they cause serious damage. We have addressed asbestos in this bill. We didn't ban it on this bill, which I support . . . but we have made asbestos a priority in this bill.[80]

EPA's failure to consider so-called "legacy" uses of asbestos (e.g., asbestos currently in place in buildings and on pipes and equipment) in its risk evaluation process, and the agency's failures otherwise to identify properly the conditions of use for asbestos, means EPA will not consider the risks from, among others, aging asbestos-containing tiles, adhesives, and piping in millions of homes, commercial buildings, and in underground infrastructure nationwide.[81] By failing to identify and assess exposures from the full range of known and likely uses, EPA is failing to characterize the full range of risks posed by asbestos and thus cannot possibly satisfy its mandate under TSCA to eliminate unreasonable risks of injury to health or the environment, without consideration of costs or other non-risk factors, including unreasonable risks to a potentially exposed or susceptible subpopulation.

The vast majority of the asbestos currently in place in the U.S. is in the form of "legacy" materials. The relatively small amounts of new asbestos being introduced into the United States,

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[79] *See Occupational Safety and Health Administration Safety and Health Topics: Asbestos, available at https://www.osha.gov/SLTC/asbestos/.*

[80] Sen. Barbara Boxer speaking in support of H.R. 2576, the Frank R. Lautenberg Chemical Safety for the 21st Century Act, 114th Congress, Second Session, 162 Cong. Rec. S3511 (Jun. 7, 2016).

[81] Legacy uses of asbestos excluded from the scope of the risk evaluation include: asbestos arc chutes; asbestos packings; asbestos pipeline wrap; asbestos protective clothing; asbestos separators in fuel cells and batteries; asbestos-cement flat sheet: asbestos-cement pipe and fittings; asbestos-cement shingles; asbestos-reinforced plastics; automatic transmission friction components; beater-add gaskets; clutch facings; corrugated asbestos-cement sheet; extruded sealant tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; roofing felt; and vinyl-asbestos floor tile. *See* Scope of the Risk Evaluation for Asbestos, Jun. 2017, pp. 24-25, *available at*: https://www.epa.gov/sites/production/files/2017-06/documents/asbestos_scope_06-22-17.pdf.

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as documented by EPA in the asbestos Problem Formulation[82] pales in comparison to the amount of asbestos currently in place in buildings, vehicles, underground, and elsewhere. While only approximately 300 metric tons, or 661,387 pounds, of asbestos was imported into the U.S. in 2017,[83] an amount of approximately 11,598 metric tons, or 25,568,292 pounds, of asbestos containing materials has been documented as having been disposed of as solid waste or otherwise released in the U.S. in 2015.[84] These so-called "legacy" use materials continue to present very significant exposure risks, both in the asbestos abatement process and as a result of environmental releases from the disturbance of "legacy" materials that are not subject to the abatement process. For example, the cutting and beveling of asbestos cement pipe leads to extremely high airborne concentrations of asbestos fibers putting workers at risk.[85]

EPA does not even attempt to provide a rationale for ignoring exposures related to the current widespread and most common uses of asbestos by excluding so-called "legacy" uses from its risk evaluations under Section 6 of TSCA.[86] Rather than providing either legal or data-based justifications for its decision, the agency merely states:

> EPA interprets the mandates under section 6(a)-(b) to conduct risk evaluations and any corresponding risk management to focus on current and prospective uses for which manufacture, processing, or distribution in commerce is intended, known or reasonably foreseen, rather than reaching back to evaluate the risks associated with legacy uses, associated disposal, and legacy disposal, and interprets the definition of "conditions of use" in that context (TSCA section 6(b)(4)(B)). In other words, EPA interprets the risk evaluation process of section 6 to focus on the continuing flow of chemical substances from manufacture, processing and distribution in commerce into the use and disposal stages of their life cycle. Consistent with this rationale, EPA has excluded certain uses from the scope of the risk evaluation, as identified below.[87]

Another "legacy" use not included in EPA's Scope of the Risk Evaluation for Asbestos is the use of Libby Amphibole asbestos (which EPA describes as "a mixture of several mineral fibers such as winchite, richterite, and tremolite found in vermiculite ore near Libby, Montana).[88] This notwithstanding that EPA readily admits Libby Amphibole has the potential for human exposure:

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[82] *Problem Formulation of the Risk Evaluation for Asbestos*, pp. 21–22.

[83] *Id.* at p. 22.

[84] *Id.* at p. 28.

[85] Kumagi S. et al. 1993. "Estimation of Asbestos Exposure Among Workers Repairing Asbestos Cement Pipes Used for Conduits." *Japan Journal of Industrial Health*, 178-87; Noble W.M. et al. 1977. *Asbestos Exposures During the Cutting and Machining of Asbestos Cement Pipe*. Report prepared for the A/C Pipe Producers Association. Berkeley, CA: Equitable Environmental Health, Inc.

[86] There are reports that a Russian mining company recently praised the Trump Administration for downplaying the health risks of the cancer-causing mineral. *See, e.g.*, http://www.newsweek.com/trumps-face-stamped-russian-asbestos-products-tied-putin-donald-our-side-1018327 (last accessed Jul. 11, 2018).

[87] *Problem Formulation of the Risk Evaluation for Asbestos*, p. 20.

[88] *Scope of the Risk Evaluation for Asbestos*, dated Jun. 2017, p. 25.

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> Although vermiculite contaminated with the Libby Amphibole remains in buildings as an insulating material and therefore presents the potential for human exposure, vermiculite containing the Libby Amphibole is no longer manufactured or processed for use in the United States and therefor is not considered a condition of asbestos use for the purpose of risk evaluation under TSCA."[89]

Here, EPA is arbitrarily and capriciously limiting the uses that qualify as conditions of use to future applications, even while confirming the potential for human exposure as well as the risks to human health presented by such exposures.

Moreover, EPA is taking inconsistent and irreconcilable positions with respect to how it views conditions-of-use determinations.

On February 17, 2017, the current administration's EPA announced[90] the availability of EPA's response to a petition EPA received in November 2016 under Section 21 of TSCA[91] from a group of organizations, including Fluoride Action Network, Food & Water Watch, and the Organic Consumers Association, asking EPA to exercise its TSCA Section 6 authority to ban the purposeful fluoridation of U.S. water supplies.

In its denial of the petition, EPA interpreted TSCA's requirements for determining "conditions of use" for risk evaluations under Section 6 of TSCA as appropriately very broad consistent with the intent of Congress in reforming TSCA. In its finding issued less than eighteen months ago, EPA announced:

> Unless EPA establishes an exemption under TSCA section 6(g) (whereby certain unreasonable risks may be allowed to persist for a limited period) or EPA is addressing a persistent, bioaccumulative, and toxic substance as set forth in TSCA section 6(h), the standard for an adequate rule under TSCA section 6(a) is that it regulates "so that the chemical substance or mixture no longer presents" unreasonable risks under the conditions of use. 15 U.S.C. 2605(a). Prior to the 2016 amendment of TSCA, EPA completed risk assessments that were limited to selected uses of chemical substances. The amended TSCA authorizes EPA to issue TSCA section 6 rules that are not comprehensive of the conditions of use, so long as they are consistent with the scope of such pre-amendment risk assessments. 15 U.S.C. 2625(l)(4). But *EPA has interpreted the amended TSCA as requiring that forthcoming risk evaluations encompass all manufacture, processing, distribution in commerce, use, and disposal activities that the Administrator determines are intended, known or reasonably foreseen.*[92]

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[89] *Id.*

[90] 82 Fed. Reg. 11,878 (Feb. 17, 2017)

[91] 15 U.S.C. § 2620.

[92] 82 Fed. Reg. 11,878 (Feb. 17, 2017), at 11,879–11,880 (emphasis supplied).

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Following EPA's denial of the petition, the petitioners challenged the denial in federal district court.[93]

EPA moved to dismiss the federal court challenge because the petitioners did not address conditions of use other than fluoridation of drinking water. As EPA stated in its denial of the petition: "Rather than comprehensively addressing the conditions of use that apply to a particular chemical substance, the petition requests EPA to take action on a single condition of use (water fluoridation) that cuts across a category of chemical substances (fluoridation chemicals)."[94]

The court denied EPA's motion, recognizing that a citizen petitioner under Section 21 of TSCA need not evaluate all conditions of use for the chemical substance at issue. However, for TSCA Section 6 chemical substance risk evaluations by EPA, as opposed to Section 21 determinations regarding citizens' petitions, TSCA requires the agency comprehensively to address the conditions of use that apply to that particular substance. EPA's retreat from its broad interpretation of the conditions of use that must be considered under Section 6 of TSCA is both contrary to law and represents what appears to be a mere impermissible convenient reinterpretation of the statute by the agency to avoid adequately regulating chemical substances under Section 6.

2. Risk Evaluations Must Assess Exposure Pathways For All Uses, Including Those Addressed Under Other Statutes

EPA is also failing to identify properly the conditions of use by not considering exposures resulting from uses of the chemical purportedly addressed within the context of other statutory schemes.[95]

EPA claims in the Problem Formulation for perchloroethylene that it is not excluding any conditions of use for the chemical,[96] while ignoring in the risk evaluation significant pathways for exposure to that chemical, finding that the chemical is adequately regulated under other identified regulatory programs under other statutes.[97] While the protections under other regulatory schemes may reduce exposure potential, it is EPA's charge under TSCA to eliminate unreasonable risk to human health and the environment posed by the chemical, a mandate that only can be satisfied if EPA includes in its risk evaluations all known exposure pathways assessed cumulatively. Without a sound evaluation of those exposure pathways, whether potentially addressed by other regulatory schemes or not, EPA cannot fulfill its mandate to

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[93] *Food and Water Watch v. EPA*, Docket No. 3:17-cv-02162-EMC (N.D. Ca.).

[94] 82 Fed. Reg. 11,878 (Feb. 17, 2017), at pp. 11,881–11,882.

[95] Under TSCA, Section 9(b), 15 U.S.C.§ 2608(b), EPA "shall coordinate actions taken under this chapter with actions taken under other Federal laws administered in whole or in part by the Administrator." However, this does not authorize the Administrator to rely on these other actions without evaluating the risks in the context of TSCA's requirements that EPA eliminate unreasonable risks of injury to health or the environment.

[96] *See Problem Formulation of the Risk Evaluation for Perchloroethylene (Ethene, 1,1,2,2-Tetrachloro), CASRN: 127-18-4 (May 2018),* p. 22

[97] *Id.* at p. 59.

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evaluate and eliminate unreasonable risks posed by these chemicals.[98]

Perchloroethylene, known as perc, is a dry cleaning solvent and is also used as a metal degreaser, a chemical intermediate and an ingredient in consumer products, such as automotive aerosol parts cleaners and degreasers. Perc has been reported to be the chemical most widely found in groundwater contamination at Superfund sites.[99] Acute exposures to perchloroethylene have been associated with dizziness, confusion, headache, nausea, and irritation of the eyes and mucous tissue, while exposure to extremely high levels of perc may lead to unconsciousness and, in extreme cases, death from respiratory depression.[100] Long term exposure to perc may cause liver, kidney or central nervous system damage, and perc has been characterized by the International Agency on Research on Cancer (IARC) as "probably carcinogenic to humans."[101]

In the perchloroethylene Problem Formulation, Section 2.5.3.2, EPA carves out recognized exposure pathways from its analysis:

> **Pathways That EPA Does Not Expect to Include in the Risk Evaluation**
>
> Exposures to receptors may occur from industrial and/or commercial uses, industrial releases to air, water or land; and other conditions of use. As described in [this section], pathways under other environmental statutes, administered by EPA, which adequately assess and effectively manage exposures and for which long-standing regulatory and analytical processes already exist will not be included in the risk evaluation.[102]

The Problem Formulation then identifies the statutory schemes under which perchloroethylene is regulated: (i) the Clean Air Act (regulates perc as a hazardous air pollutant and prescribes technology-based standards and other limitations as required for stationary source emissions of perchloroethylene); (ii) the Safe Drinking Water Act (sets Maximum Contaminant Levels for perc in drinking water); (iii) the federal Clean Water Act (perchloroethylene is a "priority pollutant" requiring the adoption of numeric criteria and discharge permit limits to protect surface water quality and perchloroethylene has been identified in biosolids reviews that EPA says it plans to address in the future); and (iv) the Resource Conservation and Recovery Act (RCRA) (perchloroethylene is a listed hazardous waste, the treatment, storage, and disposal of

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[98] 15 U.S.C. § 2605.

[99] *Perchloroethylene Fact Sheet*, MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS (2007), *available at* https://www.turi.org/TURI_Publications/TURI_Chemical_Fact_Sheets/Perchloroethylene_PCE_Fact_Sheet/PCE_Details/PCE-Fact-Sheet-pdf.

[100] *Id.*

[101] *Id.*

[102] *See Problem Formulation of the Risk Evaluation for Perchloroethylene (Ethene, 1,1,2,2-Tetrachloro), CASRN: 127-18-4 (May 2018)*, p. 59.

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which is regulated under the act).[103]

However, EPA's charge under TSCA is to evaluate the risks from the full range of exposures in the circumstances under which the chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of, to determine whether the chemical substance presents an unreasonable risk of injury to health or the environment.[104] Even if EPA's actions under its separate regulatory programs for perchloroethylene described above serve to meet each statute's requirements for protections under that statute, relying on each of those individual mandates for addressing the chemical as a pollutant (mandates designed to reduce impacts and exposures but not eliminate them), provides no assurance that TSCA's mandate for eliminating unreasonable risks will be met because the potential cumulative effect of exposures to the chemical across environmental media must be considered in its evaluations. The standard for an adequate rule under TSCA section 6(a)[105] is that it regulate so that the chemical substance no longer presents unreasonable risks to public health and the environment, and it necessarily follows that EPA must evaluate the potential for exposure and risk associated with perchloroethylene being regulated under those schemes, and make appropriate TSCA regulatory determinations that account for those anticipated exposures, in order to regulate the chemical as Section 6 requires.

This flaw is also highlighted in the Problem Formulation of the Risk Evaluation for Methylene Chloride.[106] Methylene chloride is a chlorinated solvent commonly used as a metal degreaser, a chemical intermediate, a reaction extraction solvent, a paint stripper, and as a component of adhesives, found in consumer products that can be purchased at local automotive and hardware stores.[107] Methylene chloride exposure can result in serious adverse health effects,

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[103] *Id.* at pp. 59–63.

[104] *See* Section 6(b)(4)(A) of TSCA; 15 U.S.C. § 2605(b)(4)(A) and Section 3(4) of TSCA; 15 U.S.C. § 2602(4).

[105] 15 U.S.C. § 2605(a).

[106] Note that on May 10, 2018, EPA announced its intention to finalize a rule making for methylene chloride. *See EPA Announces Action on Methylene Chloride*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/newsreleases/epa-announces-action-methylene-chloride (last accessed Jul. 10, 2018). To our knowledge, EPA has not specified the action it plans to take and it is not clear whether EPA plans to adopt a ban of the chemical and if so, the extent of such ban. However, the Environmental Defense Fund has argued that to protect public health, the final rule should "Ban distribution in commerce and use of methylene chloride for paint and coating removal; extend to both consumer and commercial uses . . . ; not provide exemptions based on training, labeling or use of protective equipment; be finalized and implemented quickly; [and] require full compliance within as short as possible a period." *See* Richard Denison, Ph.D., Lead Senior Scientist, Environmental Defense Fund, *Critical 'blanks' in EPA's methylene chloride announcement need to be filled in if it is to be health protective,* May 10, 2018, http://blogs.edf.org/health/2018/05/10/critical-blanks-in-epas-methylene-chloride-announcement-need-to-be-filled-in-if-it-is-to-be-health-protective/ (last accessed Jul. 10, 2018). Home Depot, Loews, and Sherwin-Williams have committed to phasing out methylene chloride and NMP based paint strippers by the end of 2018. *See* Chemical Watch, *Campaigners secure third paint stripper victory with Home Depot*," Jun. 20, 2018, https://chemicalwatch.com/67874/campaigners-secure-third-paint-stripper-victory-with-home-depot (last accessed Jul. 10, 2018).

[107] *Methylene Chloride Fact Sheet*, MASS. TOXICS USE REDUCTION INST. (2014), *available at* https://www.turi.org/TURI_Publications/TURI_Chemical_Fact_Sheets/Methylene_Chloride_Fact_Sheet/Fact_Sheet_Methylene_Chloride.2014.

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and high, short-term exposures can be lethal, with its extreme volatility making it especially dangerous because unsafe airborne concentrations can readily be created through evaporation.[108] As noted in the Problem Formulation, in its IRIS (Integrated Risk Information System) assessment, "EPA concluded that methylene chloride is 'likely to be carcinogenic in humans by all routes of exposure.'"[109] The International Agency for Research on Cancer (IARC) classifies methylene chloride as a possible human carcinogen (Group 2B),[110] and the National Toxicology Program of the U.S. Department of Health and Human Services classifies methylene chloride as "reasonably anticipated to be a human carcinogen."[111]

Methylene chloride is a widespread contaminant in our environment. For example, the problem formulation notes that "[d]ata compiled between 1992 and 2001 from NAWQA [the U.S. Geological Survey's National Water Quality Assessment Program] showed methylene chloride to be found in 6% of all ground water and surface water samples, with occurrences more common in surface water. Methylene chloride was detected in 20% of sediment samples in the [EPA] STORET database."[112]

And yet, EPA plans to exclude exposure pathways for methylene chloride that allegedly are addressed under other statutes although these pathways have been identified for regulation precisely because they are known or suspected to pose a serious concern.[113] For example, EPA plans to exclude from consideration: (i) "stationary source releases of methylene chloride to ambient air," as methylene chloride is regulated as a hazardous air pollutant (HAP) under the Clean Air Act;[114] and (ii) exposures through drinking water because these are regulated under the Safe Drinking Water Act.[115] EPA also plans to exclude from consideration "methylene chloride-based extraction solvents for oils, waxes, fats, spices, and hops" because they "meet the definition of food additive" under the Federal Food, Drug and Cosmetic Act, and so would ignore potentially significant exposure pathways.[116] By excluding consideration of exposures to methylene chloride through drinking water and other pathways of chronic exposure, it will not be possible for EPA to conduct an adequate risk evaluation for methylene chloride under Section 6 of TSCA.

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[108] *Id.*

[109] *See Problem Formulation of the Risk Evaluation for Methylene Chloride (May 2018),* p. 46 (references omitted).

[110] *See* International Agency for Research on Cancer, Agents Classified by the *IARC Monographs*, Volumes 1–121, p. 12, at: http://monographs.iarc.fr/ENG/Classification/ClassificationsAlphaOrder.pdf (last accessed Jul. 25, 2018).

[111] U.S. DEP'T OF HEALTH AND HUMAN SVCS., National Toxicology Program, Report on Carcinogens (RoC), Fourteenth Edition, Dichloromethane, *available at* https://ntp.niehs.nih.gov/ntp/roc/content/profiles/dichloromethane.pdf (last accessed Jul. 25, 2018).

[112] *Id.* at p. 36 (references omitted).

[113] *Id.* at p. 47.

[114] *Id.* at p. 54.

[115] *Id.*

[116] *Id.* at p. 21.

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Through this misguided approach of ignoring uses that are subject to other regulatory schemes, EPA has essentially eliminated from consideration those pathways that Congress has prioritized for regulation to date.

B. Scientific Standards: Best Available Science/Scientific Weight of Evidence

The approach to science expressed by EPA as reflected in the Problem Formulations fails to satisfy TSCA's "best available science" standard for the quality of data that EPA must consider in preparing its risk evaluation, and TSCA's "weight of scientific evidence" standard for decision making under Section 2605.[117]

Under TSCA, Congress expressly required EPA to engage in science-based actions to prevent unreasonable risk of injury to health or the environment as result of exposures to hazardous chemical substances:

> **(h) Scientific standards**
>
> In carrying out section [2605] of this title . . . the Administrator shall use scientific information, technical procedures, measures, methods, protocols, methodologies, or models, employed in a manner *consistent with the best available science* . . . .
>
> **(i) Weight of scientific evidence**
>
> The Administrator shall make decisions under section [2605] of this title based on the weight of the scientific evidence.[118]
>
> * * *
>
> (k) Reasonably available information
>
> In carrying out sections 2603, 2604, and 2605 of this title, the Administrator shall take into consideration information relating to a chemical substance or mixture, including hazard and exposure information, under the conditions of use, that is *reasonably available* to the Administrator.[119]

EPA is failing to account for some of the most significant, generally recognized pathways

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[117] On April 30, 2018, EPA published the so-called *Strengthening Transparency in Regulatory Science* proposed rule limiting the body of scientific evidence that EPA will consider when adopting regulatory standards to protect human health and the environment. 83 Fed. Reg. 18768 (Apr. 30, 2018). While the comment period on the proposed rule is still open, the proposed rule raises concerns about the ability of EPA to satisfy its mandate under TSCA with respect to the quality of data that it will consider in carrying out its mandate to eliminate unreasonable risks of injury to health or the environment.

[118] TSCA, Section 26(h) and (i) (emphasis supplied); 15 U.S.C. § 2625(h) and (i) (emphasis supplied).

[119] *Id.* at § 2625(k) (emphasis supplied).

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of exposure in the Problem Formulations.[120] It follows that it is impossible for EPA to satisfy the "best available science" standard because it is choosing to put on blinders and ignore some of the most meaningful data with respect to risks of exposure to the chemical substance.

Additionally, in its evaluation of uses in the Problem Formulations EPA fails to satisfy its statutory duties to review all reasonably available information. The Problem Formulations are rife with examples of instances where it appears that EPA stopped short of complete data collection, failing to satisfy its statutory obligation to consider the information "reasonably available" to it.[121] Unfortunately, notwithstanding Congress's express requirement that EPA use the "best available science" in regulating toxic chemicals, the Problem Formulations on their face make it impossible for EPA to conduct the risk evaluations as required in this regard. The recent overhaul of TSCA was designed to address the recognized failures of traditional risk assessment to consider the big picture of toxic chemicals exposures and address the landscape of the many uses and exposure pathways affecting different people in different ways.[122] TSCA, as amended by the Lautenberg Act, addresses this by mandating comprehensive risk evaluations in which EPA reviews chemical substances broadly in the context of the chemical substances' known, intended, and reasonably foreseen uses across the full spectrum of potentially exposed populations. The Problem Formulations, which would restrict EPA's reviews to certain uses and exposures that do not reflect the pathways through which people and the environment are affected by these chemical substances, will not meet the express purpose of TSCA as amended and should be abandoned in this regard.

CONCLUSION

We believe that the risk evaluations that EPA proposes to conduct for the Initial Ten TSCA Chemicals, in which the agency plans to consider only a subset of the uses for which the chemical substances are intended, known or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed, fails to satisfy the requirements for risk evaluations under TSCA. We therefore urge EPA to issue revised Scopes of the Risk Evaluation for each of the Initial Ten TSCA Chemicals to address the concerns we raise above regarding the agency's unlawful approach to identifying the conditions of use as that term is properly understood under TSCA and to ensure that the data EPA considers in its risk evaluations satisfies TSCA's "best available science" standards. After conducting appropriate risk evaluations, we expect EPA will impose new protective restrictions, and in some cases bans, for at least some of the Initial Ten TSCA Chemicals.

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[120] *See, e.g.*, Section III(A)(2), above.

[121] 15 U.S.C. § 2625(k).

[122] *See* Richard Denison, Ph.D., Lead Senior Scientist, Environmental Defense Fund, *Final TSCA framework rules retreat from best available* science, http://blogs.edf.org/health/2017/06/29/final-tsca-framework-rules-retreat-from-best-available-science/ (last accessed Jul. 8, 2018).

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We would be pleased to provide further input as EPA continues its Section 6 risk evaluations under TSCA. Please do not hesitate to contact us if you wish to engage us further in this important effort.

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August 3, 2018

Via Electronic Filing

EPA-HQ-OPPT-2016-0736 (Asbestos)
EPA-HQ-OPPT-2016-0741 (1-Bromopropane)
EPA-HQ-OPPT-2016-0723 (1,4-Dioxane)
EPA-HQ-OPPT-2016-0733 (Carbon Tetrachloride)
EPA-HQ-OPPT-2016-0735 (Cyclic Aliphatic Bromide Cluster, also known as HBCD)
EPA-HQ-OPPT-2016-0742 (Methylene Chloride)
EPA-HQ-OPPT-2016-0743 (N-Methylpyrrolidone (NMP))
EPA-HQ-OPPT-2016-0725 (Pigment Violet 29)
EPA-HQ-OPPT-2016-0732 (Tetrachloroethylene, also known as Perchloroethylene)
EPA-HQ-OPPT-2016-0737 (Trichloroethylene (TCE))
EPA-HQ-OPPT-2018-0210 (Application of Systemic Review in TSCA Risk Evaluations)

Charlotte Bertrand, Acting Principal Deputy Assistant Administrator
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Re: Notice of Availability on Problem Formulations for the Risk Evaluations to be Conducted Under the Toxic Substances Control Act for Asbestos, 1-Bromopropane, 1,4 Dioxane, Carbon Tetrachloride, Cyclic Aliphatic Bromide Cluster, also known as HBCD, Methylene Chloride, N-Methylpyrrolidone (NMP), Pigment Violet 29, Tetrachloroethylene, also known as Perchloroethylene, and Trichloroethylene (TCE) and General Guiding Principles to Apply Systematic Review in TSCA Risk Evaluations (83 Fed. Reg. 26,998 (Jun. 11, 2018))

Dear Acting Principal Deputy Assistant Administrator Bertrand:

The Attorneys General of Massachusetts, California, Hawaii, Maine, Maryland, New Jersey, New York, Oregon, Vermont, Washington, and the District of Columbia appreciate this opportunity to comment on the U.S. Environmental Protection Agency's ("EPA") problem formulations of the risk evaluations for the ten chemical substances (the "Initial Ten TSCA Chemicals")[1] that are the subject of EPA's initial chemical risk evaluations required under the

[1] *See* 15 U.S.C. § 2605(b)(2)(A), requiring EPA promptly to initiate risk evaluations on ten chemical substances drawn from the agency's *TSCA Work Plan for Chemical Assessments: 2014 Update*,

Frank R. Lautenberg Chemical Safety for the 21st Century Act (the "Lautenberg Act"),[2] amending the Toxic Substances Control Act (TSCA).[3]

In its notice dated June 11, 2018, EPA requested comments on the problem formulation documents for the Initial Ten TSCA Chemicals (the "Problem Formulations") to assist the agency in developing its draft risk evaluations for these chemical substances.[4]

The Attorneys General submit the following comments for EPA's consideration as EPA proceeds with its risk evaluations of the Initial Ten TSCA Chemicals.[5]

SUMMARY OF COMMENTS

The undersigned Attorneys General support the goal that motivated the Lautenberg Act amendments to TSCA, signed into law on June 22, 2016: the goal of reforming TSCA to remove obstacles that had prevented EPA from playing a more robust role in protecting public health and the environment from toxic chemicals.

Unfortunately, the Problem Formulations are antithetical to that purpose. EPA takes the position that TSCA authorizes the agency to consider in its risk evaluation a mere subset of the uses for which the chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed. That interpretation would result in EPA's risk evaluations being woefully incomplete by ignoring significant exposure pathways for the chemical substances. This unlawfully restrictive application of TSCA ignores that Congress intended for EPA to assess a chemical in its entirety, based on all identifiable conditions of use, including ongoing and legacy uses, like the ubiquitous continued use of notoriously hazardous asbestos, in its risk evaluations. For this reason, the Problem Formulations would produce deeply flawed risk evaluations that would make it impossible for EPA to fulfill its statutory mandate under Section 6 of TSCA of establishing requirements for the Initial Ten TSCA Chemicals to ensure that none of the chemical substances presents "an unreasonable risk of injury to health or the environment."[6]

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https://www.epa.gov/sites/production/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf, and publish the list within 180 days after June 22, 2016. The Initial Ten TSCA Chemicals are: Asbestos, 1-Bromopropane, 1,4-Dioxane, Carbon Tetrachloride, Cyclic Aliphatic Bromide Cluster, also known as HBCD, Methylene Chloride, N-Methylpyrrolidone (NMP), Pigment Violet 29, Tetrachloroethylene, also known as Perchloroethylene, and Trichloroethylene (TCE). *See Designation of Ten Chemical Substances for Initial Risk Evaluations Under the Toxic Substances Control Act*, 81 Fed. Reg. 91,927 (Dec. 19, 2016).

[2] Pub. L. No. 114—182, 130 Stat. 448 (Jun. 22, 2016).

[3] 15 U.S.C. § 2601, et seq.

[4] *See* 83 Fed. Reg. 26,998 (Jun. 11, 2018). EPA also solicited comments on its "*Application of Systematic Review in TSCA Risk Evaluations*," dated May 2018, which these comments do not address.

[5] The framework rules that EPA issued to implement the amendments to TSCA, Section 6, including with respect to the procedures for conducting risk evaluations, are currently under review in the Ninth Circuit. *See Safer Chemicals, Healthy Families, et al., v. EPA, et al.*, Docket No. 17-72260 (9th Cir.).

[6] *See* 15 U.S.C. § 2605(a).

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We thus urge EPA to issue revised Scopes of the Risk Evaluation, which the Problem Formulations are meant to refine,[7] for each of the Initial Ten TSCA Chemicals to address the agency's fatally flawed approach to identifying the conditions of use as that term is understood under TSCA and to ensure that the data EPA considers in the process satisfies TSCA's "best available science" standards. Given the well-documented hazards of many of the Initial Ten TSCA Chemicals, we fully expect that after conducting appropriate risk evaluations, EPA will impose new protective restrictions, and in some cases bans, for the chemical substances in this group.

These comments proceed as follows. In Part I, we describe TSCA's requirements for the risk evaluations. In Part II, we provide a summary of our states' interests with regard to the risk evaluations. In Part III, we offer analysis supporting our call for EPA to reconsider its approach to its conditions of use characterizations and to ensure that data consistent with TSCA's requirements are considered in the risk evaluation process. Finally, we suggest an appropriate risk evaluation path forward that will satisfy Congress's mandate under TSCA that EPA act to eliminate unreasonable risks of injury to health or the environment, without consideration of costs or other non-risk factors, including an unreasonable risk to potentially exposed or susceptible subpopulations.

I. Risk Evaluations for the Initial Ten TSCA Chemicals

Under TSCA, as amended, EPA is required to prioritize chemical substances for regulatory review and then assess the risks posed by the chemicals identified as priorities. Risk is a function of hazard and exposure, and to evaluate the risks posed by a chemical as TSCA requires it is necessary to consider the full range of exposures. However, in the Problem Formulations EPA has, without basis in law or fact, eliminated from its risk evaluation process many significant sources of chronic exposure to these toxic chemical substances.

Section 6 of TSCA requires EPA systematically to prioritize for risk evaluation, and to evaluate the potential risks presented by, the manufacture, processing, distribution in commerce, use, or disposal of chemical substances or mixtures.[8] Within 180 days of enactment of the 2016 TSCA amendments, that is by December 19, 2016, EPA was required to begin risk evaluations on ten chemical substances drawn from the agency's *TSCA Work Plan for Chemical Assessments: 2014 Update* (the "2014 TSCA Work Plan Update")[9] and to publish the list of such

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[7] 83 Fed.Reg. 26,998 at 26,999.

[8] 15 U.S.C. § 2605.

[9] In 2012, EPA identified 83 chemicals for assessment as part of its chemical safety program. According to EPA, the screening process for identifying the chemicals was based on a combination of hazard, exposure (including via uses), and persistence and bioaccumulation characteristics, and in developing the 2014 Update the agency continued to use the process, which focused on chemicals that meet one or more of the following factors: (i) potential concern for children's health (for example, because of reproductive or developmental effects); (ii) neurotoxic effects; (iii) persistent, bioaccumulative and toxic; (iv) probable or known carcinogens; (v) used in children's products or in products to which children may be highly exposed; and (vi) detected in biomonitoring programs. *See TSCA Work Plan for Chemical Assessments: 2014 Update*, https://www.epa.gov/sites/production/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf.

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chemical substances during the 180-day period.[10] On December 19, 2016, EPA designated the Initial Ten TSCA Chemicals for risk evaluation: Asbestos, 1-Bromopropane, 1,4-Dioxane, Carbon Tetrachloride, Cyclic Aliphatic Bromide Cluster (also known as HBCD), Methylene Chloride, N-Methylpyrrolidone (NMP), Pigment Violet 29, Tetrachloroethylene (also known as Perchloroethylene), and Trichloroethylene (TCE).[11]

Under TSCA, Section 6(b)(4)(A), EPA is required to conduct a risk evaluation for each of the Initial Ten TSCA Chemicals, and for chemicals later designated as "high-priority," to determine whether the

> . . . chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of cost or other nonrisk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant to the risk evaluation by the Administrator, under the conditions of use.[12]

And under TSCA, Section 6(b)(4)(D), EPA was required to publish the scope of the risk evaluation to be conducted for each of the Initial Ten TSCA Chemicals within six months after the initiation of the risk evaluation.[13]

On July 7, 2017, EPA published its Notice of Availability for the Scopes of the Risk Evaluations To Be Conducted for the First Ten Chemical Substances Under the Toxic Substances Control Act.[14] Under TSCA, those scopes must include the hazards, exposures, conditions of use, and the potentially exposed or susceptible subpopulations the Administrator expects to consider in his or her analysis.[15] Thereafter, EPA published the subject Problem Formulations in the Federal Register on June 11, 2018,[16] with the Problem Formulations being said to function to refine the earlier-published scope documents.[17]

II. The Interests of the Participating States

Our states have a significant interest in ensuring that the risk evaluations for the Initial Ten TSCA Chemicals are conducted in accordance with TSCA. The Initial Ten TSCA

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[10] 15 U.S.C. § 2605(b)(2)(A).

[11] *See Designation of Ten Chemical Substances for Initial Risk Evaluations Under the Toxic Substances Control Act*, 81 Fed. Reg. 91,927 (Dec. 19, 2016).

[12] 15 U.S.C. § 2605(b)(4)(A).

[13] 15 U.S.C. § 2605(b)(4)(D).

[14] 82 Fed. Reg. 31,592 (Jul. 7, 2017).

[15] *See* 15 U.S.C. § 2605(b)(4)(D).

[16] 83 Fed. Reg. 26,998 (Jun. 11, 2018).

[17] *Id.* at 26,999.

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Chemicals were drawn from the agency's 2014 TSCA Work Plan Update,[18] as required by TSCA,[19] and were selected based on their hazard and potential exposure, as well as other factors such as persistence and bioaccumulation.[20] For example, asbestos is a known carcinogen, with acute and chronic toxicity associated with inhalation exposures; tetrachloroethylene (also known as perchloroethylene or perc) is a probable human carcinogen with high reported releases to the environment; and n-methylpyrrolidone (NMP) has high reported releases to the environment and is associated with reproductive toxicity.[21] The potential for substantial harm to public health and the environment associated with the Initial Ten TSCA Chemicals resulted in their being chosen as the first candidates for risk evaluation. Thus, the consequences for our states' residents of a federal failure to identify those risks and to regulate accordingly may be dire, with the potential for even greater risk to susceptible subpopulations, where the failure to perform a full analysis may have the most severe adverse impact.

As evidenced by the following overview of actions by many of the participating states and the District of Columbia, the unreasonable risks to human health and the environment that the Initial Ten TSCA Chemicals pose justifies governmental response. In fact, it is just such health- and environment-protective regulation at the federal level that informed the 2016 amendments to TSCA.

Additionally, the data listed below that demonstrates the prevalence of the Initial Ten TSCA Chemicals in our states further confirms the states' significant interest in ensuring that EPA implements TSCA as it was revised by the Lautenberg Act: to eliminate "unreasonable risk of injury to health or the environment" from the "intended, known, or reasonably foreseen" manufacturing, processing, distribution in commerce, use, or disposal of chemicals.[22]

Massachusetts

Under the Massachusetts Toxics Use Reduction Act, G.L. c. 21I ("TURA"), large-quantity chemical users in the Commonwealth are required to report annually on their use of toxic chemicals and conduct toxics use reduction planning every two years. Each of the Initial Ten TSCA Chemicals, with the exception of Cyclic Aliphatic Bromide Cluster, also known as HBCD, and Pigment Violet 29, are on the TURA chemicals list and are subject to TURA's requirements.[23] Moreover, the TURA program may designate "Higher" or "Lower Hazard Substances" within the larger TURA list of Toxic or Hazardous Substances. If a chemical is designated as a Higher Hazard Substance (HHS) under TURA, the thresholds for reporting for

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[18] *See TSCA Work Plan for Chemical Assessments: 2014 Update,* https://www.epa.gov/sites/production/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf.

[19] *See* 15 U.S.C. § 2605(b)(2)(A).

[20] 81 Fed. Reg. 91,927 (Dec. 19, 2016), at 91,928–91,929.

[21] *Id.*

[22] 15 U.S.C. § 2602(4) and § 2605(b)(4)(A).

[23] That HBCD and Pigment Violet 29 are not listed does not represent any judgment of the toxicity of these chemicals. It simply means that they have not been taken up for consideration and possible addition to the TURA list and they may later be added to the TURA list.

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those chemicals are lowered. To date, the TURA program has designated 14 chemicals or chemical categories as HHS.[24] Four of the Initial Ten TSCA Chemicals are designated as HHS under TURA: trichloroethylene, perchloroethylene, 1-bromopropane, and methylene chloride.[25]

In Massachusetts, the Toxics Use Reduction Institute ("TURI"), created under TURA, Section 6, and the Massachusetts Office of Technical Assistance and Technology ("OTA"), its partner agency, work with Massachusetts businesses to reduce the use of toxic chemicals in the state. TURI and OTA are engaged in on-going work to help Massachusetts businesses and communities reduce their use of toxic solvents including trichloroethylene, perchloroethylene, methylene chloride, 1-bromopropane, and n-methylpyrrolidone, as well as helping businesses adopt safer alternatives to toxic flame retardants, among other efforts. This work to assist Massachusetts businesses and communities complements other regulatory activities within the Commonwealth to protect workers, communities and the environment from these and other toxic chemicals.

Massachusetts also comprehensively regulates asbestos through a set of overlapping state and delegated federal programs involving multiple state agencies. From 2011–2015, the U.S. Centers for Disease Control and Prevention (CDC) reports there were 441 new cases of mesothelioma in Massachusetts, resulting in 366 deaths.[26] Asbestos exposure is the known cause of mesothelioma.

- The Massachusetts Department of Environmental Protection ("MassDEP") is authorized by the Massachusetts Clean Air Act, M.G.L. c. 111, §§ 142A-O, and the federal Clean Air Act, 42 U.S.C. § 7401, et seq., to prevent air pollution by regulating asbestos handling, transport, and disposal.
- MassDEP requires notice and remediation of releases of asbestos to the environment as a hazardous material under the state's "superfund" law, M.G.L. c. 21E.
- MassDEP also regulates the disposal of asbestos under the Massachusetts Solid Waste Management Act, M.G.L. c. 111, § 150A.
- The Massachusetts Department of Labor Standards ("DLS") ensures worker safety in Massachusetts by licensing asbestos-related work and requiring the use of proper work practices and safety equipment pursuant to M.G.L. c. 149.
- DLS is also delegated authority under the Asbestos Hazard Emergency Response Act, 15 U.S.C. § 2641, et seq., to regulate asbestos in schools for the safety of the school community.

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[24] *See Designation of TURA Higher and Lower Hazard Substances in Massachusetts*, MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS (2016), https://www.turi.org/TURI_Publications/TURI_Chemical_Fact_Sheets/Higher_and_Lower_Hazard_Substances.

[25] That six of the Initial Ten TSCA Chemicals are not designated as HHS in Massachusetts does not mean that the TURA program considers them to be less toxic than others. Rather, it means that those chemicals have not yet been addressed under this regulatory process.

[26] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

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- The Massachusetts Office of the Attorney General is empowered to initiate litigation to enforce these state statutes and to seek court orders for compliance and civil penalties.

The Attorney General also conducts other work to encourage the safe use and public awareness of asbestos, such as leading a multi-party stakeholder effort to create a comprehensive online public database of asbestos information about Massachusetts schools in response to a report by the Office of Senator Edward J. Markey identifying a lack of this information nationally.

California

Because of the significant harm to human health and the environment that the Initial Ten TSCA Chemicals pose, California has implemented regulatory measures including, but not limited to: prohibiting the sale, supply, and manufacturing for use of specified consumer product categories that contain any of the following compounds: TCE, PCE, or methylene chloride;[27] regulating exposure to asbestos in construction work,[28] general industry,[29] shipyards[30] and prohibiting sale of brake pads with asbestiform fibers above .1% weight.[31] California has proposed regulation of methylene chloride in varnish and paint strippers under its Safer Consumer Products regulations (Cal. Code Regs., tit. 22, § 69501, et seq.). With the exception of HBCD and Pigment Violet 29, each of the Initial Ten TSCA Chemicals is listed as either a carcinogen and/or reproductive toxin under California's Safe Drinking Water and Toxic Enforcement Act of 1986 known as "Proposition 65."[32] The adverse impacts to California these substances cause are further demonstrated by the following:

- From 2011–2015, the CDC reports there were 1,716 new cases of mesothelioma in California, resulting in 1,318 deaths.[33] Asbestos exposure is the known cause of mesothelioma.
- There have been at least two deaths in California caused by exposure to paint strippers containing methylene chloride since 2012.[34]
- There are 37 sites in California with TCE contamination that have been or are on the National Priorities List (NPL) under the Comprehensive Environment Response, Compensation and Liability Act (CERCLA), 29 with PCE contamination, 6 with asbestos contamination, 10 with 1,4-dioxane contamination,

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[27] California Code of Regulations ("Cal. Code Regs."), tit. 17, §§ 93111(d), 94509(m), and 94552(e).

[28] *Id.* tit. 8, § 1529.

[29] *Id.* tit. 8, § 5208.

[30] *Id.* tit. 8, § 8358.

[31] California Health and Safety Code ("Health & Saf. Code"), § 25250.51.

[32] *Id.* § 25249.5, et seq.

[33] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[34] *See* https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/Pages/MeClLinks.aspx (last accessed July 27, 2018).

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36 with methylene chloride contamination, and 25 with carbon tetrachloride contamination. [35]

- In 2016, the most current Toxic Release Inventory (TRI) reporting year, a combined total of 2,124,369 pounds of 1,4-dioxane, asbestos, carbon tetrachloride, NMP, PCE and TCE was reported as having been disposed of or released in California.[36]

Maine

Under the Maine Priority Toxic Chemical Use Reduction law, 38 Maine Revised Statutes ("M.R.S.") §§ 2331-2330, and corresponding rule, 06-096 Code of Maine Rules ("CMR") ch. 82, commercial and industrial facilities using more than 1,000 pounds/year of a priority toxic chemical listed in Maine's rule, 06-096 CMR ch. 81, must report their usage of the chemical and must develop a pollution prevention plan, which must be updated every two years. Maine has identified five chemicals as priority toxic chemicals under this law, two of which are on the list of Initial Ten TSCA Chemicals—perchloroethylene and trichloroethylene.

Maine regulates several of the chemicals on the list of Initial Ten TSCA Chemicals as hazardous matter and hazardous substances.[37] In addition, Maine regulates control technology for dry cleaners using perchloroethylene.[38]

Maine also comprehensively regulates asbestos abatement activities to ensure safe working conditions pursuant to its asbestos law, 38 M.R.S. §§ 1271-1284, and its corresponding rule, 06-096 CMR ch. 425, and the disposal and transportation of asbestos under its Solid Waste Management Rules, 06-096 CMR ch. 401 (disposal); 06-096 CMR ch. 411 (transportation). Additionally, in Maine, all sellers of residential real property are required to disclose the presence of asbestos or the prior removal of asbestos to potential buyers.[39] From 2011–2015, the CDC reports there were 128 new cases of mesothelioma in Maine, resulting in 107 deaths.[40]

Moreover, the Maine Department of Environmental Protection has been delegated by the U.S. Environmental Protection Agency to conduct periodic Asbestos Hazard Emergency Response Act (AHERA) compliance inspections in Maine's non-profit school systems.

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[35] Data reflected by searching California for all active NPL sites for these contaminants via EPA's Superfund Enterprise Management System at https://cumulis.epa.gov/supercpad/CurSites/srchsites.cfm.

[36] Data reflected by searching the TRI for California as to release or disposal of Initial Ten TSCA Chemicals via EPA's TRI Explorer at https://iaspub.epa.gov/triexplorer/tri_release.chemical (last accessed August 2, 2018).

[37] 38 M.R.S. § 1362(1); 06-096 CMR ch. 800, 801.

[38] 06-096 CMR ch. 125.

[39] 33 M.R.S. § 173(4).

[40] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

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Maryland

Maryland regulates the manufacture, sale, use, and disposal of chemicals—including some of the substances to be addressed in EPA's initial risk evaluations—in a variety of ways. For instance, businesses engaged in the removal or encapsulation of asbestos may do so only pursuant to a license issued by the Maryland Department of the Environment—which, in turn, has prescribed strict procedures governing such activities.[41] From 2011–2015, the CDC reports there were 258 new cases of mesothelioma in Maryland, resulting in 207 deaths.[42]

More broadly, the Department regulates the disposal of hazardous waste, including substances included in EPA's Initial Ten TSCA Chemicals.[43] Maryland Department of the Environment regulations generally prohibit the sale, supply, offer for sale, or manufacture for use in the state of adhesives, cleaners, and other products containing methylene chloride, perchloroethylene, or trichloroethylene.[44] Additionally, the Maryland Secretary of Health may declare a substance to be "hazardous material" and establish labeling requirements or, where appropriate, ban the substance.[45] The Secretary has exercised this authority by incorporating by reference Parts 1500 and 1505 of Title 16 of the Code of Federal Regulations (implementing the Federal Hazardous Substances Act).[46] The Secretary is authorized to inspect facilities where hazardous material may be manufactured, processed, packaged, or stored, as well as vehicles used to transport or hold such material.[47]

New York

New York regulates the manufacture, sale, use and disposal of chemicals, including some at issue in the Problem Formulations, in a variety of ways. For example, New York has a de facto ban on the use of 1-bromopropane, also known as n-propyl bromide, in dry cleaning.[48] New York will not issue an Air Facility Registration to any facility proposing to use that chemical as an alternative dry cleaning solvent as it is not an approved alternative solvent. New York has spent millions of dollars cleaning up tetrachloroethylene (perc) and trichloroethylene at hazardous waste sites. To help remove 1,4-dioxane from drinking water on Long Island, New York has conditionally approved a new treatment technology.[49] As regards asbestos, New York

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[41] *See* Annotated Code of Maryland ("Md. Code Ann."), Env't tit. 6 subtit. 4; Code of Maryland Regulations ("Md. Code Regs.") tit. 26, subtit. 11, ch. 21.

[42] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[43] Md. Code Regs. tit. 26, subtit. 13.

[44] Md. Code Regs. 26.11.32.08 to .09.

[45] Md. Code Ann., Health § 22-502.

[46] Md. Code Regs. 10.19.02.01.

[47] Md. Code Ann., Health § 22-506.

[48] *See* NEW YORK STATE DEP'T OF ENVTL. CONSERVATION, *Approved Alternative Solvents for Dry Cleaning, available at* http://www.dec.ny.gov/chemical/72273.html.

[49] *See* Governor's Office, "*Governor Cuomo Announces Conditional Approval For New Drinking Water Treatment Technology in Suffolk County*," *available at* https://www.governor.ny.gov/news/governor-cuomo-announces-

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has a number of regulatory programs in place: the Department of Health certifies and trains employees who perform asbestos abatement; the Department of Labor regulates asbestos abatement and removal projects; and the Department of Environmental Conservation regulates the transportation and disposal of asbestos waste.[50]

Oregon

Oregon has adopted, and is considering, several state-specific statutes and regulations to manage the impacts of toxic and hazardous pollutants that encompass the majority of the Initial Ten TSCA Chemicals. These programs include:

- Asbestos emissions, disposal, licensing and certification requirements.[51] From 2011–2015, the CDC reports there were 245 new cases of mesothelioma in Oregon, resulting in 223 deaths.[52]
- Air toxics permits and benchmarks for industrial facilities.[53] In addition, Oregon is currently in the process of developing new rules on industrial air emissions that would regulate emissions based on health risks to neighboring communities. The proposed rules will regulate emissions of hundreds of chemicals, including several of the Initial Ten TSCA Chemicals: asbestos, 1-bromopropane, carbon tetrachloride, 1,4 dioxane, tetrachloroethylene, and trichloroethylene. Oregon is relying on federal guidance and expertise to help define potential health risks for communities that are exposed to these emissions and to ensure that communities are protected from cumulative risks from other potential exposure pathways.
- Toxics Use and Hazardous Waste Reduction planning requirements,[54] which apply to large and small quantity generators of hazardous waste and Toxic Release Inventory reporters.
- State cleanup and remedial actions for hazardous substances,[55] and separate rules for dry cleaning facilities with perchloroethylene (tetrachloroethylene).[56] In addition, legacy contamination from industrial sites is still a potential source of exposure to several of the Initial Ten TSCA Chemicals. The Oregon Health Authority's Environmental Health Assessment Program evaluates potential public health risks from contaminated sites across our state. In the last year alone, the program has been asked to evaluate public health risks from sites where

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[50] *See* New York State Department of Environmental Conservation, Asbestos Regulation, at https://www.dec.ny.gov/chemical/8791.html.

[51] Oregon Revised Statutes (ORS) 468A.700 to 468A.760 and Oregon Administrative Rules (OAR) ch. 340, div. 248).

[52] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[53] OAR ch. 340, div. 246.

[54] ORS 465.003 to 465.037 and OAR 340-135.

[55] ORS 465.200 through 465.455 and 465.900, and OAR ch.340, div. 122.

[56] ORS 465.200 and 465.500 through 465.548, and OAR 340-124.

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environmental monitoring projects detected at least one of the Initial Ten TSCA Chemicals, including 1,4 dioxane, carbon tetrachloride, methylene chloride, tetrachloroethylene, and/or trichloroethylene.

- Oregon adopted the Toxic Free Kids Act in 2015, requiring manufacturers of children's products to report the presence of specific chemicals of concern in products sold in Oregon.[57] Several of the Initial Ten TSCA Chemicals are being reported in that program, including 1,4 dioxane, methylene chloride, tetrachloroethylene, and hexabromocyclododecane.[58] Oregon relies on information from federal agencies to evaluate potential health risks of chemicals of concern for children, to identify new chemicals of concern to add to the reporting list, and to help address cumulative risks from these chemicals through other routes of exposure.

Across all of these programs, Oregon has compiled data documenting the presence of the majority of the Initial Ten TSCA Chemicals in various environmental media. EPA must consider the full scope of impacts from these chemicals in states like Oregon in determining the scope of TSCA risk evaluations for the Initial Ten TSCA Chemicals.

Washington

The Washington State Waste Reduction Act ("WRA") was enacted "[i]n the interest of protecting the public health, safety, and the environment[.]"[59] Under the WRA, any person generating over 2,640 pounds of hazardous waste annually is required to "prepare a plan for the voluntary reduction of the use of hazardous substances and the generation of hazardous wastes."[60] The Revised Code of Washington 70.95C.020 provides that both dangerous waste and extremely hazardous waste "shall specifically include those wastes designated as dangerous by rules adopted pursuant to chapter 70.105 RCW."[61] Accordingly, pursuant to RCW 70.105, the Washington State Department of Ecology ("Ecology") has designated five of the Initial Ten TSCA Chemicals as dangerous wastes subject to voluntary reduction plans.[62]

Within Ecology, the WRA establishes an office of waste reduction (also referred to as Ecology).[63] Ecology's duties, in part, include encouraging the reduction of hazardous waste use, coordinating with all state agency programs to provide technical assistance, and coordinating public education programs on waste reduction.[64] Additionally, Ecology provides technical

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[57] ORS 431A.250 through 431A.280.

[58] OAR 333-016-2020.

[59] Revised Code of Washington ("RCW") 70.95C.010.

[60] RCW 70.95C.200(1); Washington Administrative Code ("WAC") 173-305-015.

[61] RCW 70.95C.020(3), (5).

[62] *See* WAC 173-303-090(8), -9903, -9904, -9905 (listing 1,4-dioxane, carbon tetrachloride, methylene chloride, tetrachloroethylene, and trichloroethylene).

[63] RCW 70.95C.030(1).

[64] *See* RCW 70.95C.030.

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assistance in preparing plans pursuant to WRA in an effort to reduce the use of such dangerous wastes.[65]

In the context of hazardous waste and toxics reduction, Washington State has additional statutes that authorize Ecology to regulate asbestos and many Initial Ten TSCA Chemicals due to their associated harms to public health and the environment.[66] For example, Washington's Better Brakes Law mandates a phase out of asbestos in brake friction material that is sold, or offered for sale, in Washington State.[67] From 2011–2015, the CDC reports there were 463 new cases of mesothelioma in Washington State, resulting in 394 deaths.[68] In addition, under Washington's Children's Safe Products Act, manufacturers whose products contain certain chemicals, like N-Methylpyrrolidone, methylene chloride, tetrachloroethylene, and HBCD, must annually report to Ecology.[69] With respect to children's products containing HBCD, a flame retardant, Ecology is required to evaluate "potential impacts on human health and the environment resulting from . . . [chemical] exposure" when developing policies and recommendations.[70]

Ecology collaborates with many state agencies, such as the Washington State Department of Health, and works with industries and environmental stakeholders, to identify chemicals that pose the highest risks to human health and the environment. Thereafter, Ecology develops and enforces policies, toxic chemical regulations, and plans to reduce or eliminate the use of toxic chemicals.

District of Columbia

The District of Columbia's Hazardous Waste Management Act includes provisions for toxic chemical source reporting and reduction.[71] Businesses identified by the Standard Industrial Classification (SIC) as the largest generators or within the top 25% of all hazardous waste generators within the District, or that release a toxic chemical subject to regulation are required to file an annual Toxic Release Inventory (TRI) Form R for each TRI-listed chemical it manufactures, processes or otherwise uses in quantities above the threshold reporting quantity.[72] In addition, reporting facilities must prepare and submit a toxic chemical source reduction plan which must be updated every four years.[73] TRI-listed chemicals include the following toxic substances included in the Initial Ten TSCA Chemicals: trichloroethylene, 1-bromopropane and n-methylpyrrolidone.

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[65] *Id.*

[66] *See* RCW 70.285, .240.

[67] RCW 70.285; WAC 173-901-010.

[68] *See* https://gis.cdc.gov/Cancer/USCS/DataViz.html (last accessed July 26, 2018).

[69] RCW 70.240; *see also* WAC 173-334-130 (list of chemicals of high concern to children).

[70] RCW 70.240.035(3), .010(8).

[71] Code of the District of Columbia ("D.C. Code"), Chapter 13, Subchapter II.

[72] D.C. Code § 8-1317.

[73] D.C. Code § 8-1318.

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The District also regulates the removal and abatement of asbestos through its own licensing and permitting requirements to ensure the safe removal and disposal of asbestos-containing material and the safety of asbestos abatement workers and the surrounding community.[74]

III. Analysis

A. The Problem Formulations Reflect a Fatally Flawed Conditions-of-Use Approach

Under Section 6(b)(4)(A) of TSCA, EPA conducts risk evaluations to "determine whether a chemical substance presents an unreasonable risk of injury to health or the environment . . . under the conditions of use."[75] And the term "conditions of use" is defined as "the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."[76]

So, under TSCA, EPA must conduct risk evaluations to determine whether a "chemical substance" presents an unreasonable risk under the circumstances under which that substance is "intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."[77] The plain language of the statue requires EPA to evaluate the risks of each chemical substance identified for evaluation under all circumstances for which exposures can be anticipated, including the so-called "legacy" uses, which clearly are circumstances under which these chemicals are "known . . . to be . . . used or disposed of."[78] Without basis in law or fact, the risk evaluation scheme reflected in the Problem Formulations fails to evaluate the risks for each chemical under all circumstances for which exposures can be anticipated and by failing to do so frustrates TSCA's purposes by ignoring exposures and underestimating risks posed by the chemical substances. For example, where the hazard posed by a chemical may relate to multiple exposure pathways, ignoring one of these pathways may result in underestimating the total, cumulative risk posed by the chemical. Such underestimation may adversely impact determinations of risk to certain populations, including those who are particularly exposed or sensitive to the chemical's adverse effects. Therefore, any risk evaluations conducted under the risk evaluation scheme reflected in the Problem Formulations cannot satisfy EPA's mandate under TSCA.

1. EPA is Ignoring Highly Risky "Legacy Uses," Putting Public Health and the Environment in Grave Peril

In the Problem Formulations, EPA has eliminated from its analysis many of the most important sources of chronic exposure to these toxic chemicals by defining away these exposure

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[74] 20 D.C. Municipal Regulations § 20-800.

[75] 15 U.S.C. § 2605(b)(4)(A).

[76] Section 3(4) of TSCA; 15 U.S.C. § 2602(4).

[77] *Id.*

[78] *Id.*

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pathways through the agency's unjustified narrowing of the conditions of use it will consider. Most significant, perhaps, is EPA's irrational decision to eliminate so-called "legacy" uses from its evaluations. This willful ignorance is both unlawful and patently dangerous based on the hazards both to people and the environment presented by unaccounted-for exposures to any of the Initial Ten TSCA Chemicals.

The most glaring and egregious example of this dereliction of EPA's statutory obligations comes in the Problem Formulation for asbestos. Asbestos is a known carcinogen and there is no safe level of exposure to this highly toxic material ubiquitous in our built environment.[79] The potential for harm posed by asbestos is universally recognized and addressing its risks was a priority in reforming TSCA:

> Asbestos, for example, is one of the most harmful chemicals known to humankind, and it takes 15,000 lives a year. It is linked to a deadly form of lung cancer called mesothelioma. People can breathe in these fibers deep into their lungs where they cause serious damage. We have addressed asbestos in this bill. We didn't ban it on this bill, which I support . . . but we have made asbestos a priority in this bill.[80]

EPA's failure to consider so-called "legacy" uses of asbestos (e.g., asbestos currently in place in buildings and on pipes and equipment) in its risk evaluation process, and the agency's failures otherwise to identify properly the conditions of use for asbestos, means EPA will not consider the risks from, among others, aging asbestos-containing tiles, adhesives, and piping in millions of homes, commercial buildings, and in underground infrastructure nationwide.[81] By failing to identify and assess exposures from the full range of known and likely uses, EPA is failing to characterize the full range of risks posed by asbestos and thus cannot possibly satisfy its mandate under TSCA to eliminate unreasonable risks of injury to health or the environment, without consideration of costs or other non-risk factors, including unreasonable risks to a potentially exposed or susceptible subpopulation.

The vast majority of the asbestos currently in place in the U.S. is in the form of "legacy" materials. The relatively small amounts of new asbestos being introduced into the United States,

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[79] *See Occupational Safety and Health Administration Safety and Health Topics: Asbestos, available at https://www.osha.gov/SLTC/asbestos/.*

[80] Sen. Barbara Boxer speaking in support of H.R. 2576, the Frank R. Lautenberg Chemical Safety for the 21st Century Act, 114th Congress, Second Session, 162 Cong. Rec. S3511 (Jun. 7, 2016).

[81] Legacy uses of asbestos excluded from the scope of the risk evaluation include: asbestos arc chutes; asbestos packings; asbestos pipeline wrap; asbestos protective clothing; asbestos separators in fuel cells and batteries; asbestos-cement flat sheet: asbestos-cement pipe and fittings; asbestos-cement shingles; asbestos-reinforced plastics; automatic transmission friction components; beater-add gaskets; clutch facings; corrugated asbestos-cement sheet; extruded sealant tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; roofing felt; and vinyl-asbestos floor tile. *See* Scope of the Risk Evaluation for Asbestos, Jun. 2017, pp. 24-25, *available at*: https://www.epa.gov/sites/production/files/2017-06/documents/asbestos_scope_06-22-17.pdf.

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as documented by EPA in the asbestos Problem Formulation[82] pales in comparison to the amount of asbestos currently in place in buildings, vehicles, underground, and elsewhere. While only approximately 300 metric tons, or 661,387 pounds, of asbestos was imported into the U.S. in 2017,[83] an amount of approximately 11,598 metric tons, or 25,568,292 pounds, of asbestos containing materials has been documented as having been disposed of as solid waste or otherwise released in the U.S. in 2015.[84] These so-called "legacy" use materials continue to present very significant exposure risks, both in the asbestos abatement process and as a result of environmental releases from the disturbance of "legacy" materials that are not subject to the abatement process. For example, the cutting and beveling of asbestos cement pipe leads to extremely high airborne concentrations of asbestos fibers putting workers at risk.[85]

EPA does not even attempt to provide a rationale for ignoring exposures related to the current widespread and most common uses of asbestos by excluding so-called "legacy" uses from its risk evaluations under Section 6 of TSCA.[86] Rather than providing either legal or data-based justifications for its decision, the agency merely states:

> EPA interprets the mandates under section 6(a)-(b) to conduct risk evaluations and any corresponding risk management to focus on current and prospective uses for which manufacture, processing, or distribution in commerce is intended, known or reasonably foreseen, rather than reaching back to evaluate the risks associated with legacy uses, associated disposal, and legacy disposal, and interprets the definition of "conditions of use" in that context (TSCA section 6(b)(4)(B)). In other words, EPA interprets the risk evaluation process of section 6 to focus on the continuing flow of chemical substances from manufacture, processing and distribution in commerce into the use and disposal stages of their life cycle. Consistent with this rationale, EPA has excluded certain uses from the scope of the risk evaluation, as identified below.[87]

Another "legacy" use not included in EPA's Scope of the Risk Evaluation for Asbestos is the use of Libby Amphibole asbestos (which EPA describes as "a mixture of several mineral fibers such as winchite, richterite, and tremolite found in vermiculite ore near Libby, Montana).[88] This notwithstanding that EPA readily admits Libby Amphibole has the potential for human exposure:

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[82] *Problem Formulation of the Risk Evaluation for Asbestos*, pp. 21–22.

[83] *Id.* at p. 22.

[84] *Id.* at p. 28.

[85] Kumagi S. et al. 1993. "Estimation of Asbestos Exposure Among Workers Repairing Asbestos Cement Pipes Used for Conduits." *Japan Journal of Industrial Health*, 178-87; Noble W.M. et al. 1977. *Asbestos Exposures During the Cutting and Machining of Asbestos Cement Pipe*. Report prepared for the A/C Pipe Producers Association. Berkeley, CA: Equitable Environmental Health, Inc.

[86] There are reports that a Russian mining company recently praised the Trump Administration for downplaying the health risks of the cancer-causing mineral. *See, e.g.*, http://www.newsweek.com/trumps-face-stamped-russian-asbestos-products-tied-putin-donald-our-side-1018327 (last accessed Jul. 11, 2018).

[87] *Problem Formulation of the Risk Evaluation for Asbestos*, p. 20.

[88] *Scope of the Risk Evaluation for Asbestos*, dated Jun. 2017, p. 25.

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> Although vermiculite contaminated with the Libby Amphibole remains in buildings as an insulating material and therefore presents the potential for human exposure, vermiculite containing the Libby Amphibole is no longer manufactured or processed for use in the United States and therefor is not considered a condition of asbestos use for the purpose of risk evaluation under TSCA."[89]

Here, EPA is arbitrarily and capriciously limiting the uses that qualify as conditions of use to future applications, even while confirming the potential for human exposure as well as the risks to human health presented by such exposures.

Moreover, EPA is taking inconsistent and irreconcilable positions with respect to how it views conditions-of-use determinations.

On February 17, 2017, the current administration's EPA announced[90] the availability of EPA's response to a petition EPA received in November 2016 under Section 21 of TSCA[91] from a group of organizations, including Fluoride Action Network, Food & Water Watch, and the Organic Consumers Association, asking EPA to exercise its TSCA Section 6 authority to ban the purposeful fluoridation of U.S. water supplies.

In its denial of the petition, EPA interpreted TSCA's requirements for determining "conditions of use" for risk evaluations under Section 6 of TSCA as appropriately very broad consistent with the intent of Congress in reforming TSCA. In its finding issued less than eighteen months ago, EPA announced:

> Unless EPA establishes an exemption under TSCA section 6(g) (whereby certain unreasonable risks may be allowed to persist for a limited period) or EPA is addressing a persistent, bioaccumulative, and toxic substance as set forth in TSCA section 6(h), the standard for an adequate rule under TSCA section 6(a) is that it regulates "so that the chemical substance or mixture no longer presents" unreasonable risks under the conditions of use. 15 U.S.C. 2605(a). Prior to the 2016 amendment of TSCA, EPA completed risk assessments that were limited to selected uses of chemical substances. The amended TSCA authorizes EPA to issue TSCA section 6 rules that are not comprehensive of the conditions of use, so long as they are consistent with the scope of such pre-amendment risk assessments. 15 U.S.C. 2625(l)(4). But *EPA has interpreted the amended TSCA as requiring that forthcoming risk evaluations encompass all manufacture, processing, distribution in commerce, use, and disposal activities that the Administrator determines are intended, known or reasonably foreseen.*[92]

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[89] *Id.*

[90] 82 Fed. Reg. 11,878 (Feb. 17, 2017)

[91] 15 U.S.C. § 2620.

[92] 82 Fed. Reg. 11,878 (Feb. 17, 2017), at 11,879–11,880 (emphasis supplied).

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Following EPA's denial of the petition, the petitioners challenged the denial in federal district court.[93]

EPA moved to dismiss the federal court challenge because the petitioners did not address conditions of use other than fluoridation of drinking water. As EPA stated in its denial of the petition: "Rather than comprehensively addressing the conditions of use that apply to a particular chemical substance, the petition requests EPA to take action on a single condition of use (water fluoridation) that cuts across a category of chemical substances (fluoridation chemicals)."[94]

The court denied EPA's motion, recognizing that a citizen petitioner under Section 21 of TSCA need not evaluate all conditions of use for the chemical substance at issue. However, for TSCA Section 6 chemical substance risk evaluations by EPA, as opposed to Section 21 determinations regarding citizens' petitions, TSCA requires the agency comprehensively to address the conditions of use that apply to that particular substance. EPA's retreat from its broad interpretation of the conditions of use that must be considered under Section 6 of TSCA is both contrary to law and represents what appears to be a mere impermissible convenient reinterpretation of the statute by the agency to avoid adequately regulating chemical substances under Section 6.

2. *Risk Evaluations Must Assess Exposure Pathways For All Uses, Including Those Addressed Under Other Statutes*

EPA is also failing to identify properly the conditions of use by not considering exposures resulting from uses of the chemical purportedly addressed within the context of other statutory schemes.[95]

EPA claims in the Problem Formulation for perchloroethylene that it is not excluding any conditions of use for the chemical,[96] while ignoring in the risk evaluation significant pathways for exposure to that chemical, finding that the chemical is adequately regulated under other identified regulatory programs under other statutes.[97] While the protections under other regulatory schemes may reduce exposure potential, it is EPA's charge under TSCA to eliminate unreasonable risk to human health and the environment posed by the chemical, a mandate that only can be satisfied if EPA includes in its risk evaluations all known exposure pathways assessed cumulatively. Without a sound evaluation of those exposure pathways, whether potentially addressed by other regulatory schemes or not, EPA cannot fulfill its mandate to

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[93] *Food and Water Watch v. EPA*, Docket No. 3:17-cv-02162-EMC (N.D. Ca.).

[94] 82 Fed. Reg. 11,878 (Feb. 17, 2017), at pp. 11,881–11,882.

[95] Under TSCA, Section 9(b), 15 U.S.C.§ 2608(b), EPA "shall coordinate actions taken under this chapter with actions taken under other Federal laws administered in whole or in part by the Administrator." However, this does not authorize the Administrator to rely on these other actions without evaluating the risks in the context of TSCA's requirements that EPA eliminate unreasonable risks of injury to health or the environment.

[96] *See Problem Formulation of the Risk Evaluation for Perchloroethylene (Ethene, 1,1,2,2-Tetrachloro), CASRN: 127-18-4 (May 2018),* p. 22

[97] *Id.* at p. 59.

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evaluate and eliminate unreasonable risks posed by these chemicals.[98]

Perchloroethylene, known as perc, is a dry cleaning solvent and is also used as a metal degreaser, a chemical intermediate and an ingredient in consumer products, such as automotive aerosol parts cleaners and degreasers. Perc has been reported to be the chemical most widely found in groundwater contamination at Superfund sites.[99] Acute exposures to perchloroethylene have been associated with dizziness, confusion, headache, nausea, and irritation of the eyes and mucous tissue, while exposure to extremely high levels of perc may lead to unconsciousness and, in extreme cases, death from respiratory depression.[100] Long term exposure to perc may cause liver, kidney or central nervous system damage, and perc has been characterized by the International Agency on Research on Cancer (IARC) as "probably carcinogenic to humans."[101]

In the perchloroethylene Problem Formulation, Section 2.5.3.2, EPA carves out recognized exposure pathways from its analysis:

> **Pathways That EPA Does Not Expect to Include in the Risk Evaluation**
>
> Exposures to receptors may occur from industrial and/or commercial uses, industrial releases to air, water or land; and other conditions of use. As described in [this section], pathways under other environmental statutes, administered by EPA, which adequately assess and effectively manage exposures and for which long-standing regulatory and analytical processes already exist will not be included in the risk evaluation.[102]

The Problem Formulation then identifies the statutory schemes under which perchloroethylene is regulated: (i) the Clean Air Act (regulates perc as a hazardous air pollutant and prescribes technology-based standards and other limitations as required for stationary source emissions of perchloroethylene); (ii) the Safe Drinking Water Act (sets Maximum Contaminant Levels for perc in drinking water); (iii) the federal Clean Water Act (perchloroethylene is a "priority pollutant" requiring the adoption of numeric criteria and discharge permit limits to protect surface water quality and perchloroethylene has been identified in biosolids reviews that EPA says it plans to address in the future); and (iv) the Resource Conservation and Recovery Act (RCRA) (perchloroethylene is a listed hazardous waste, the treatment, storage, and disposal of

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[98] 15 U.S.C. § 2605.

[99] *Perchloroethylene Fact Sheet*, MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS (2007), *available at* https://www.turi.org/TURI_Publications/TURI_Chemical_Fact_Sheets/Perchloroethylene_PCE_Fact_Sheet/PCE_Details/PCE-Fact-Sheet-pdf.

[100] *Id.*

[101] *Id.*

[102] *See Problem Formulation of the Risk Evaluation for Perchloroethylene (Ethene, 1,1,2,2-Tetrachloro), CASRN: 127-18-4 (May 2018)*, p. 59.

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which is regulated under the act).[103]

However, EPA's charge under TSCA is to evaluate the risks from the full range of exposures in the circumstances under which the chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of, to determine whether the chemical substance presents an unreasonable risk of injury to health or the environment.[104] Even if EPA's actions under its separate regulatory programs for perchloroethylene described above serve to meet each statute's requirements for protections under that statute, relying on each of those individual mandates for addressing the chemical as a pollutant (mandates designed to reduce impacts and exposures but not eliminate them), provides no assurance that TSCA's mandate for eliminating unreasonable risks will be met because the potential cumulative effect of exposures to the chemical across environmental media must be considered in its evaluations. The standard for an adequate rule under TSCA section 6(a)[105] is that it regulate so that the chemical substance no longer presents unreasonable risks to public health and the environment, and it necessarily follows that EPA must evaluate the potential for exposure and risk associated with perchloroethylene being regulated under those schemes, and make appropriate TSCA regulatory determinations that account for those anticipated exposures, in order to regulate the chemical as Section 6 requires.

This flaw is also highlighted in the Problem Formulation of the Risk Evaluation for Methylene Chloride.[106] Methylene chloride is a chlorinated solvent commonly used as a metal degreaser, a chemical intermediate, a reaction extraction solvent, a paint stripper, and as a component of adhesives, found in consumer products that can be purchased at local automotive and hardware stores.[107] Methylene chloride exposure can result in serious adverse health effects,

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[103] *Id.* at pp. 59–63.

[104] *See* Section 6(b)(4)(A) of TSCA; 15 U.S.C. § 2605(b)(4)(A) and Section 3(4) of TSCA; 15 U.S.C. § 2602(4).

[105] 15 U.S.C. § 2605(a).

[106] Note that on May 10, 2018, EPA announced its intention to finalize a rule making for methylene chloride. *See EPA Announces Action on Methylene Chloride*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/newsreleases/epa-announces-action-methylene-chloride (last accessed Jul. 10, 2018). To our knowledge, EPA has not specified the action it plans to take and it is not clear whether EPA plans to adopt a ban of the chemical and if so, the extent of such ban. However, the Environmental Defense Fund has argued that to protect public health, the final rule should "Ban distribution in commerce and use of methylene chloride for paint and coating removal; extend to both consumer and commercial uses . . . ; not provide exemptions based on training, labeling or use of protective equipment; be finalized and implemented quickly; [and] require full compliance within as short as possible a period." *See* Richard Denison, Ph.D., Lead Senior Scientist, Environmental Defense Fund, *Critical 'blanks' in EPA's methylene chloride announcement need to be filled in if it is to be health protective,* May 10, 2018, http://blogs.edf.org/health/2018/05/10/critical-blanks-in-epas-methylene-chloride-announcement-need-to-be-filled-in-if-it-is-to-be-health-protective/ (last accessed Jul. 10, 2018). Home Depot, Loews, and Sherwin-Williams have committed to phasing out methylene chloride and NMP based paint strippers by the end of 2018. *See* Chemical Watch, *Campaigners secure third paint stripper victory with Home Depot*," Jun. 20, 2018, https://chemicalwatch.com/67874/campaigners-secure-third-paint-stripper-victory-with-home-depot (last accessed Jul. 10, 2018).

[107] *Methylene Chloride Fact Sheet*, MASS. TOXICS USE REDUCTION INST. (2014), *available at* https://www.turi.org/TURI_Publications/TURI_Chemical_Fact_Sheets/Methylene_Chloride_Fact_Sheet/Fact_Sheet_Methylene_Chloride.2014.

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and high, short-term exposures can be lethal, with its extreme volatility making it especially dangerous because unsafe airborne concentrations can readily be created through evaporation.[108] As noted in the Problem Formulation, in its IRIS (Integrated Risk Information System) assessment, "EPA concluded that methylene chloride is 'likely to be carcinogenic in humans by all routes of exposure.'"[109] The International Agency for Research on Cancer (IARC) classifies methylene chloride as a possible human carcinogen (Group 2B),[110] and the National Toxicology Program of the U.S. Department of Health and Human Services classifies methylene chloride as "reasonably anticipated to be a human carcinogen."[111]

Methylene chloride is a widespread contaminant in our environment. For example, the problem formulation notes that "[d]ata compiled between 1992 and 2001 from NAWQA [the U.S. Geological Survey's National Water Quality Assessment Program] showed methylene chloride to be found in 6% of all ground water and surface water samples, with occurrences more common in surface water. Methylene chloride was detected in 20% of sediment samples in the [EPA] STORET database."[112]

And yet, EPA plans to exclude exposure pathways for methylene chloride that allegedly are addressed under other statutes although these pathways have been identified for regulation precisely because they are known or suspected to pose a serious concern.[113] For example, EPA plans to exclude from consideration: (i) "stationary source releases of methylene chloride to ambient air," as methylene chloride is regulated as a hazardous air pollutant (HAP) under the Clean Air Act;[114] and (ii) exposures through drinking water because these are regulated under the Safe Drinking Water Act.[115] EPA also plans to exclude from consideration "methylene chloride-based extraction solvents for oils, waxes, fats, spices, and hops" because they "meet the definition of food additive" under the Federal Food, Drug and Cosmetic Act, and so would ignore potentially significant exposure pathways.[116] By excluding consideration of exposures to methylene chloride through drinking water and other pathways of chronic exposure, it will not be possible for EPA to conduct an adequate risk evaluation for methylene chloride under Section 6 of TSCA.

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[108] *Id.*

[109] *See Problem Formulation of the Risk Evaluation for Methylene Chloride (May 2018),* p. 46 (references omitted).

[110] *See* International Agency for Research on Cancer, Agents Classified by the *IARC Monographs*, Volumes 1–121, p. 12, at: http://monographs.iarc.fr/ENG/Classification/ClassificationsAlphaOrder.pdf (last accessed Jul. 25, 2018).

[111] U.S. DEP'T OF HEALTH AND HUMAN SVCS., National Toxicology Program, Report on Carcinogens (RoC), Fourteenth Edition, Dichloromethane, *available at* https://ntp.niehs.nih.gov/ntp/roc/content/profiles/dichloromethane.pdf (last accessed Jul. 25, 2018).

[112] *Id.* at p. 36 (references omitted).

[113] *Id.* at p. 47.

[114] *Id.* at p. 54.

[115] *Id.*

[116] *Id.* at p. 21.

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Through this misguided approach of ignoring uses that are subject to other regulatory schemes, EPA has essentially eliminated from consideration those pathways that Congress has prioritized for regulation to date.

B. Scientific Standards: Best Available Science/Scientific Weight of Evidence

The approach to science expressed by EPA as reflected in the Problem Formulations fails to satisfy TSCA's "best available science" standard for the quality of data that EPA must consider in preparing its risk evaluation, and TSCA's "weight of scientific evidence" standard for decision making under Section 2605.[117]

Under TSCA, Congress expressly required EPA to engage in science-based actions to prevent unreasonable risk of injury to health or the environment as result of exposures to hazardous chemical substances:

> **(h) Scientific standards**
>
> In carrying out section [2605] of this title . . . the Administrator shall use scientific information, technical procedures, measures, methods, protocols, methodologies, or models, employed in a manner *consistent with the best available science* . . . .
>
> **(i) Weight of scientific evidence**
>
> The Administrator shall make decisions under section [2605] of this title based on the weight of the scientific evidence.[118]
>
> * * *
>
> (k) Reasonably available information
>
> In carrying out sections 2603, 2604, and 2605 of this title, the Administrator shall take into consideration information relating to a chemical substance or mixture, including hazard and exposure information, under the conditions of use, that is *reasonably available* to the Administrator.[119]

EPA is failing to account for some of the most significant, generally recognized pathways

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[117] On April 30, 2018, EPA published the so-called *Strengthening Transparency in Regulatory Science* proposed rule limiting the body of scientific evidence that EPA will consider when adopting regulatory standards to protect human health and the environment. 83 Fed. Reg. 18768 (Apr. 30, 2018). While the comment period on the proposed rule is still open, the proposed rule raises concerns about the ability of EPA to satisfy its mandate under TSCA with respect to the quality of data that it will consider in carrying out its mandate to eliminate unreasonable risks of injury to health or the environment.

[118] TSCA, Section 26(h) and (i) (emphasis supplied); 15 U.S.C. § 2625(h) and (i) (emphasis supplied).

[119] *Id.* at § 2625(k) (emphasis supplied).

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of exposure in the Problem Formulations.[120] It follows that it is impossible for EPA to satisfy the "best available science" standard because it is choosing to put on blinders and ignore some of the most meaningful data with respect to risks of exposure to the chemical substance.

Additionally, in its evaluation of uses in the Problem Formulations EPA fails to satisfy its statutory duties to review all reasonably available information. The Problem Formulations are rife with examples of instances where it appears that EPA stopped short of complete data collection, failing to satisfy its statutory obligation to consider the information "reasonably available" to it.[121] Unfortunately, notwithstanding Congress's express requirement that EPA use the "best available science" in regulating toxic chemicals, the Problem Formulations on their face make it impossible for EPA to conduct the risk evaluations as required in this regard. The recent overhaul of TSCA was designed to address the recognized failures of traditional risk assessment to consider the big picture of toxic chemicals exposures and address the landscape of the many uses and exposure pathways affecting different people in different ways.[122] TSCA, as amended by the Lautenberg Act, addresses this by mandating comprehensive risk evaluations in which EPA reviews chemical substances broadly in the context of the chemical substances' known, intended, and reasonably foreseen uses across the full spectrum of potentially exposed populations. The Problem Formulations, which would restrict EPA's reviews to certain uses and exposures that do not reflect the pathways through which people and the environment are affected by these chemical substances, will not meet the express purpose of TSCA as amended and should be abandoned in this regard.

CONCLUSION

We believe that the risk evaluations that EPA proposes to conduct for the Initial Ten TSCA Chemicals, in which the agency plans to consider only a subset of the uses for which the chemical substances are intended, known or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed, fails to satisfy the requirements for risk evaluations under TSCA. We therefore urge EPA to issue revised Scopes of the Risk Evaluation for each of the Initial Ten TSCA Chemicals to address the concerns we raise above regarding the agency's unlawful approach to identifying the conditions of use as that term is properly understood under TSCA and to ensure that the data EPA considers in its risk evaluations satisfies TSCA's "best available science" standards. After conducting appropriate risk evaluations, we expect EPA will impose new protective restrictions, and in some cases bans, for at least some of the Initial Ten TSCA Chemicals.

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[120] *See, e.g.*, Section III(A)(2), above.

[121] 15 U.S.C. § 2625(k).

[122] *See* Richard Denison, Ph.D., Lead Senior Scientist, Environmental Defense Fund, *Final TSCA framework rules retreat from best available* science, http://blogs.edf.org/health/2017/06/29/final-tsca-framework-rules-retreat-from-best-available-science/ (last accessed Jul. 8, 2018).

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We would be pleased to provide further input as EPA continues its Section 6 risk evaluations under TSCA. Please do not hesitate to contact us if you wish to engage us further in this important effort.

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OCSPP - ASBESTOS

BACKGROUND

- EPA is reviewing asbestos as one of the first 10 chemicals for risk evaluation under amended TSCA. The scope of the asbestos risk evaluation was published in June 2017.
- Asbestos is a substance of concern being addressed at both the state and federal level. Existing federal (EPA, OSHA, CDC), and state requirements help ensure proper management and safe disposal of asbestos-containing building material.
- EPA bans of certain asbestos products went into effect after August 1990, and August 1996. EPA also prohibited the manufacture, importation or processing of uses of asbestos not identified in 40 CFR 763.165, after August 25, 1989 (40 CFR part 763, subpart I).
- Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations specify work practices for asbestos during demolition and renovation of all structures, installations, and buildings with an exclusion for residential buildings with four or less dwelling units. These standards are designed to minimize the release of asbestos during building demolition or renovation, waste packaging, transportation and disposal.
- Asbestos Hazard Emergency Response Act (AHERA) (TSCA Title II) prevents or reduces asbestos hazards in school buildings.
- Occupational Safety and Health Administration (OSHA), as well as NESHAP, requirements prevent or reduce asbestos exposure in the workplace.
- Additional state and local regulations extend beyond the federal requirements to address asbestos in buildings, including single family homes

ISSUES

- Legacy Uses: EPA has received criticisms regarding exclusion of 'legacy' uses during evaluation of existing chemicals. Asbestos is an example where this concern arises.
  - Many legacy uses are asbestos materials found in homes, however, TSCA generally does not give EPA the authority to regulate the non-commercial use of items already within a home.
    - EPA has extensive guidance for homeowners to provide tools and information to protect themselves: [HYPERLINK "https://www.epa.gov/asbestos/protect-your-family"]
  - Existing federal and state regulations address asbestos exposure from legacy uses in all buildings with more than four dwelling units.
  - EPA's actions on asbestos will *prevent future legacy* issues with asbestos by promulgating a Significant New Use Rule (SNUR) to ensure that no new uses are initiated without EPA's review.
  - EPA believes TSCA is best suited to address uses for which a chemical is currently being manufactured, processed, or distributed, and will conduct a risk evaluation focusing on asbestos currently being manufactured, imported, processed or distributed.

TIMELINE

- June 22, 2017 – Scope of asbestos risk evaluation published
- June 1, 2018 – Publication of problem formulation and proposed SNUR
- July 24, 2018 – Public comment period ends for problem formulation
- August 10, 2018 – Public comment period ends for SNUR
- September/ October 2018 – Final SNUR and draft risk evaluation
- December 2018 – Public comment on draft risk evaluation
- December 2019 – Publication of risk evaluation for asbestos

Message

From: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Sent: 4/16/2019 10:57:56 AM
To: Strauss, Linda [Strauss.Linda@epa.gov]; Dunn, Alexandra [dunn.alexandra@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Tyler, Tom [Tyler.Tom@epa.gov]; Altieri, Sonia [Altieri.Sonia@epa.gov]
Subject: RE: Latest press release from OPA
Attachments: Asbests SNUR PR 04 16 19 AM.docx

All – here's a clean version of the press release. This includes edits from OPA and Justin/OGC. Next steps would be for you guys to send back any last edits/comments so I can get an OCSPP approved version to OPA. Once that happens Chris Beach will share the press release with the Administrator for his approval. Thanks.

From: Strauss, Linda
Sent: Monday, April 15, 2019 5:31 PM
To: Dunn, Alexandra <dunn.alexandra@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Tyler, Tom <Tyler.Tom@epa.gov>; Altieri, Sonia <Altieri.Sonia@epa.gov>
Subject: Latest press release from OPA

Message

From: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
Sent: 10/4/2018 12:02:35 AM
To: Baptist, Erik [Baptist.Erik@epa.gov]; Morris, Jeff [Morris.Jeff@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]
Subject: RE: Draft SNUR Piece
Attachments: SNURs Explained 23 Sept 2018.docx

Few more comments attached.

From: Baptist, Erik
Sent: Wednesday, October 03, 2018 4:49 PM
To: Morris, Jeff <Morris.Jeff@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>
Subject: RE: Draft SNUR Piece

Jeff,

Attached please find some quick feedback.

Erik Baptist
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, DC 20460
(202) 564-1689
baptist.erik@epa.gov

From: Morris, Jeff
Sent: Sunday, September 23, 2018 4:36 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>
Subject: Draft SNUR Piece

Charlotte, Nancy, and Erik,

For your review and comment. Short, general audience piece.

Jeff

Congress of the United States

Washington, DC 20510

December 19, 2018

The Honorable Andrew Wheeler
Acting Administrator
U.S Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, DC 20460

Ms. Nancy Beck
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Mail Code: 7101M
Washington, DC 20460

Dear Acting Administrator Wheeler and Deputy Assistant Administrator Beck:

We write to express our deep concern about recent reporting from Reuters detailing the presence of asbestos in talcum powder products used in a variety of consumer goods, including baby powders commonly used on infants. Although baby powder is subject to regulation under the Federal Food, Drug, and Cosmetic Act, other talc products sold to consumers would be within the purview of the Toxic Substances Control Act (TSCA) and thus the responsibility of EPA. Ongoing efforts to reduce the health risks of asbestos exposure would be woefully incomplete if those efforts did not address TSCA-regulated talc products contaminated with asbestos.

Research shows that asbestos exposure is responsible for more than 15,000 deaths per year, causing mesothelioma; lung, ovarian, and laryngeal cancers; and respiratory diseases such as asbestosis. Asbestos is a known carcinogen, and one for which there is no controlled use or safe level of exposure.

Fifty-five countries have already banned asbestos. Unfortunately, the United States still permits the use of asbestos, joining such countries as China, India, and Russia, the latter of which remains by far the largest exporter of asbestos. Without a ban, the United States also imports millions of dollars' worth of asbestos-contaminated consumer goods every year. Independent testing as recently as 2018 found asbestos in children's toys, crayons, and cosmetics.

Because of serious health concerns, as well as the disturbing details in the recent Reuters report, please respond to the following questions:

1. What policies and guidance does EPA have in place or in development to reduce the presence of talcum powder or any other asbestos mixtures in household consumer goods?

2. Asbestos is a known carcinogen. What steps is the EPA taking to educate and protect pregnant women, infants, and other vulnerable populations and to help them minimize exposure to asbestos?

3. The Frank R. Lautenberg Chemical Safety for the 21st Century Act, signed into law in 2016, amended and updated TSCA and explicitly addressed previous limitations on EPA authority that prevented the agency from regulating asbestos.

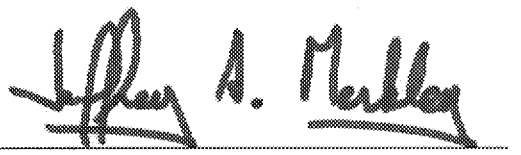
    a. Since that law was enacted, what populations has EPA identified as disproportionately at risk either because of greater exposure to asbestos or greater susceptibility to injury from asbestos?
    b. How has the identification of these populations affected EPA's decision to regulate or not to regulate asbestos?

4. EPA has proposed a significant new use rule (SNUR) under TSCA to prevent the introduction of new, potentially unsafe asbestos-containing products into commerce.

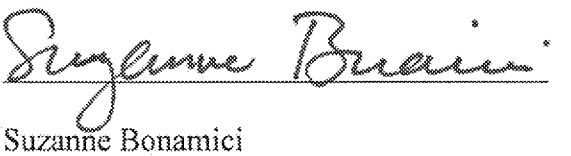
    a. When finalized, will the asbestos SNUR assure that EPA is notified of, and has the ability to restrict, all new consumer products contaminated with asbestos?
    b. If the SNUR will not accomplish this objective, please explain why.

As public servants, it is incumbent on us to ensure the health and safety of all Americans, especially those who are most vulnerable and most likely to be harmed by the presence of undisclosed asbestos. We look forward to receiving your responses to our concerns.

Respectfully,



Jeffrey A. Merkley
United States Senator



Suzanne Bonamici
United States Representative

Message

From: Baptist, Erik [Baptist.Erik@epa.gov]
Sent: 10/3/2018 8:49:27 PM
To: Morris, Jeff [Morris.Jeff@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]
Subject: RE: Draft SNUR Piece
Attachments: SNURs Explained 23 Sept 2018.docx

Jeff,

Attached please find some quick feedback.

Erik Baptist
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, DC 20460
(202) 564-1689
baptist.erik@epa.gov

From: Morris, Jeff
Sent: Sunday, September 23, 2018 4:36 PM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>
Subject: Draft SNUR Piece

Charlotte, Nancy, and Erik,

For your review and comment. Short, general audience piece.

Jeff

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Congress, through OMB, explanations when the Federal agency decides not to use available and applicable voluntary consensus standards. This authorization does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

10. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States. EPA has determined that this authorization will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations. This authorization does not affect the level of protection provided to human health or the environment because this document authorizes pre-existing State rules which are equivalent to and no less stringent than existing Federal requirements.

11. The Congressional Review Act, 5 U.S.C. 801–808

The Congressional Review Act, 5 U.S.C. 801–808, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this document and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 271

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous waste, Hazardous waste transportation, Indian lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements.

Authority: This proposed action is issued under the authority of sections 2002(a), 3006 and 7004(b) of the Solid Waste Disposal Act, as amended, 42 U.S.C. 6912(a), 6926, 6974(b).

Dated: May 2, 2018.

Cosmo Servidio,

Regional Administrator, U.S. EPA Region III.

[FR Doc. 2018–12507 Filed 6–8–18; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 721

[EPA–HQ–OPPT–2018–0159; FRL–9978–76]

RIN 2070–AK45

Asbestos; Significant New Use Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Under the Toxic Substances Control Act (TSCA), EPA is proposing a significant new use rule (SNUR) for asbestos as defined under the Asbestos Hazard Emergency Response Act. The proposed significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for certain uses identified by EPA as no longer ongoing. The Agency has found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: Adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement). Persons subject to the SNUR would be required to notify EPA at least 90 days before commencing any manufacturing (including importing) or processing of asbestos (including as part of an article) for a significant new use. The required notification initiates EPA's evaluation of the conditions of use associated with the intended use within the applicable review period. Manufacturing (including importing) and processing (including as part of an article) for the significant new use may not commence until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

DATES: Comments must be received on or before August 10, 2018.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPPT–2018–0159, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.
- *Mail:* Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.* Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT:

For technical information contact: Robert Courtnage, National Program Chemicals Division (Mail Code 7404T), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460–0001; telephone number: (202) 566–1081; email address: *courtnage.robert@epa.gov.*

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554–1404; email address: *TSCA-Hotline@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you manufacture (including import), process, or distribute in commerce asbestos as defined by TSCA Title II, Section 202 (15 U.S.C. 2642) (including as part of an article). The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Construction (NAICS code 23)
- Manufacturing (NAICS codes 31–33)
- Wholesale Trade (NAICS code 42)

• Transportation (NAICS code 48)

This action may also affect certain entities through pre-existing import certification and export notification rules under TSCA (15 U.S.C.2601 *et seq.*). Persons who import or process any chemical substance governed by a final SNUR are subject to the TSCA section 13 (15 U.S.C. 2612) import certification requirements and the corresponding regulations at 19 CFR 12.118 through 12.127 (see also 19 CFR 127.28). Those persons must certify that the shipment of the chemical substance complies with all applicable rules and orders under TSCA, including any SNUR requirements. The EPA policy in support of import certification appears at 40 CFR part 707, subpart B.

In addition, asbestos, as defined in this proposed rule, is already subject to TSCA section 6(a) (40 CFR part 763, subparts G and I) rules that trigger the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b); see also 40 CFR 721.20). Any person who exports or intends to export asbestos must comply with the export notification requirements in 40 CFR part 707, subpart D; however, although EPA is proposing to make inapplicable the exemption at 40 CFR 721.45(f) for persons who import or process any asbestos as part of an article in a category listed in Table 2, the Agency is not proposing to require export notification for articles containing asbestos.

If you have any questions regarding the applicability of this action to a particular entity, consult the technical information contact listed under **FOR FURTHER INFORMATION CONTACT.**

B. What is the Agency's authority for taking this action?

Section 5(a)(2) of TSCA (15 U.S.C. 2604(a)(2)) authorizes EPA to determine that a use of a chemical substance is a "significant new use." EPA must make this determination by rule after considering all relevant factors, including those listed in TSCA section 5(a)(2) (see Unit IV). Once EPA determines that a use of a chemical substance is a significant new use, TSCA section 5(a)(1) requires persons to submit a significant new use notice (SNUN) to EPA at least 90 days before they manufacture (including import) or process the chemical substance for that use (15 U.S.C. 2604(a)(1)(B)(i)). TSCA further prohibits such manufacturing (including importing) or processing from commencing until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination (15 U.S.C. 2604(a)(1)(B)(ii)). As described in Unit V., the general SNUR provisions are found at 40 CFR part 721, subpart A.

C. What action is the Agency taking?

EPA is proposing a SNUR for asbestos, using the definition in TSCA Title II, Section 202, which defines asbestos as the "asbestiform varieties of six fiber types—chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." The proposed significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for certain uses no longer ongoing. The Agency found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: Adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement).

The Frank R. Lautenberg Chemical Safety for the 21st Century Act (Pub. L. 114–182, 130 Stat. 448) amended TSCA in June 2016. The new law includes statutory requirements related to the risk evaluations of conditions of use for existing chemicals. Based on the 2014 update of EPA's TSCA Work Plan for Chemical Assessments, in December of 2016, EPA designated asbestos as one of the first 10 chemical substances subject to the Agency's initial chemical risk evaluations (81 FR 91927), as required by TSCA section 6(b)(2)(A) (15 U.S.C. 2605(b)(2)(A)).

EPA is separately conducting a risk evaluation of asbestos under its conditions of use, pursuant to TSCA section 6(b)(4)(A). Through scoping and subsequent research for the asbestos risk evaluation, EPA identified several conditions of use of asbestos to include in the risk evaluation. Those include imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production and several imported chrysotile asbestos-containing materials, including sheet gaskets for use in titanium dioxide chemical production, brake blocks for use in oil drilling, aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products. This proposed significant new rule would not identify as significant new uses those uses that EPA believes are currently ongoing. EPA is requesting public comment on this proposal and welcomes specific and verifiable documentation of any ongoing uses not identified by the Agency as well as additional uses not identified as no longer ongoing. This proposed SNUR would require persons that intend to manufacture (including import) or process any form of asbestos as defined under Title II of TSCA (including as part of an article) for a significant new use, consistent with the requirements at 40 CFR 721.25, to notify EPA at least 90 days before commencing such manufacturing (including importing) or processing. This proposed SNUR would preclude the commencement of such manufacturing (including importing) or processing until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

D. Why is the Agency taking this action?

This proposed SNUR is necessary to ensure that EPA receives timely advance notice of any future manufacturing (including importing) or processing of asbestos (including as part of an article) for new uses that may produce changes in human and environmental exposures, and to ensure that an appropriate determination (relevant to the risks associated with such manufacturing (including importing), processing, and use) has been issued prior to the commencement of such manufacturing (including importing) or processing. Today's action is furthermore necessary to ensure that manufacturing (including importing) or processing for the significant new use cannot proceed until EPA has responded to the circumstances by taking the required actions under Sections 5(e) or 5(f) of TSCA in the event that EPA determines any of the following: (1) That the significant new use presents an unreasonable risk under the conditions of use (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); (2) that the information available to EPA is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use; (3) that, in the absence of sufficient information, the manufacturing (including importing), processing, distribution in commerce, use, or disposal of the substance, or any combination of such activities, may present an unreasonable risk (without

consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); or (4) that there is substantial production and sufficient potential for environmental release or human exposure (as defined in TSCA section 5(a)(3)(B)(ii)(II)).

There is a strong causal association between asbestos exposure and lung cancer and mesotheliomas (tumors arising from the thin membranes that line the chest (thoracic) and abdominal cavities and surround internal organs) (Ref. 1; Ref. 2; Ref. 3; Ref. 4; Ref. 5; Ref. 6). In addition, other cancers, as well as non-cancer effects, such as respiratory and immune effects, have been associated with asbestos exposure (Ref. 7).

Agency research conducted in support of the TSCA risk evaluation of asbestos revealed that the use of asbestos has declined dramatically in the United States since the 1970s when asbestos use was at its peak. EPA is taking action in this proposed rule to ensure that EPA receives timely advance notice and makes an appropriate determination prior to the commencement of manufacturing (including importing) or processing for any significant new use of asbestos (including as part of an article) as identified in Table 2. The rationale and objectives for this proposed SNUR are explained in detail in Unit III.

E. What are the estimated incremental impacts of this action?

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers (including importers) and processors of the chemical substance included in this proposed rule. This Economic Analysis (Ref. 8), which is available in the docket, is discussed in Unit IX. and is briefly summarized here.

In the event that a SNUN is submitted, costs are estimated to be less than $10,000 per SNUN submission for large business submitters and $8,000 for small business submitters. In addition, for persons exporting a substance that is the subject of a SNUR, a one-time notice to EPA must be provided for the first export or intended export to a particular country, which is estimated to be approximately $96 per notification. However, asbestos is already subject to TSCA section 6(a) rules (40 CFR part 763, subparts G and I) that trigger the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b); see also 40 CFR 721.20), and the Agency is not proposing to require export notifications for articles containing asbestos as articles are generally excluded from the TSCA section 12(b) export notification requirements. Therefore, EPA assumes no additional costs under TSCA section 12(b) for this proposed rule.

The proposed rule may also affect firms that plan to import or process articles that may be subject to the SNUR. Although there are no specific requirements in the rule for these firms, they may choose to undertake some activity to assure themselves they are not undertaking a new use. In the accompanying Economic Analysis for this proposed SNUR (Ref. 8), example steps (and their respective costs) that an importer or processor might take to identify asbestos in articles are provided. These steps can include gathering information through agreements with suppliers, declarations through databases or surveys, or use of a third-party certification system. Additionally, importers may require suppliers to provide certificates of testing analysis of the products or perform their own laboratory testing of certain articles. EPA is unable to predict, however, what, if any, particular steps an importer might take; thus, potential total costs were not estimated.

II. Chemical Substances Subject to This Proposed Rule and Associated Background Information

A. What chemicals are included in the proposed SNUR?

This proposed SNUR applies to asbestos, using the definition in TSCA Title II (added to TSCA in 1986), Section 202, which defines asbestos as the "asbestiform varieties of six fiber types—chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." This proposed SNUR Applies to the manufacturing (including importing) or processing of asbestos (including as part of an article) for certain uses no longer ongoing. EPA found no information indicating that the following uses are ongoing, and therefore, the following uses are subject to this proposed SNUR: Adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; extruded sealant tape and other tape; filler for acetylene cylinders; high-grade electrical paper; millboard; missile liner; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; and any other building material (other than cement). Under this proposed SNUR, the exemption at 40 CFR 721.45(f) would not apply to persons who import or process asbestos as part of an article (which includes as a component of an article) because there is reasonable potential for exposure to asbestos if the substance is incorporated into articles and then imported or processed. However, in accordance with the impurity exclusion at 40 CFR 721.45(d), this proposed significant new use rule would not apply to persons who manufacture (including import) or process asbestos (including as part of an article) only as an impurity.

B. What are the production volumes and uses of asbestos?

Asbestos has not been mined or otherwise produced in the United States since 2002; therefore, any new raw bulk asbestos used in the United States is imported. According to the U.S. Geological Survey (USGS), approximately 300 metric tons of raw bulk asbestos was imported into the United States in 2017 (Ref. 9). Chrysotile is the only form of raw bulk asbestos currently imported, and the chlor-alkali industry is the only known importer (Ref. 9). EPA did not identify any domestic entity that uses raw bulk asbestos other than the chlor-alkali industry, which uses chrysotile asbestos to fabricate diaphragms for use in chlorine and sodium hydroxide production.

In an effort to identify national import volumes and conditions of use for the asbestos risk evaluation under TSCA section 6(b)(4)(A), EPA searched a number of available data sources including EPA's Chemical Data Reporting (CDR) database, USGS's Mineral Commodities Summary and the Minerals Yearbook, the U.S. International Trade Commission's Dataweb, the U.S. Customs and Border Protection's Automated Commercial Environment (ACE) System, and the *Use and Market Profile for Asbestos* (EPA–HQ–OPPT–2016–0736–0085). Based on this search, EPA published a preliminary list of information and sources related to asbestos conditions of use (see *Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos,* EPA–HQ–OPPT–2016–0736–0005) prior to a February 2017 public meeting on the scoping efforts for the risk evaluation convened to solicit public comment. EPA also convened meetings with companies, associated industry groups, chemical users and other stakeholders to aid in identifying conditions of use and verifying conditions of use identified by EPA. On June 22, 2017, EPA published the *Scope of the Risk Evaluation for Asbestos* (EPA–HQ–OPPT–2016–0736–0086), which further

provided opportunity for the public and private sector to identify conditions of use of asbestos in the United States.

During the public comment period for the *Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos* (EPA–HQ–OPPT–2016–0736–0005), one company identified the use of asbestos-containing gaskets, which are imported, for use during the production of titanium dioxide. During stakeholder discussions another company confirmed importing and distributing brake blocks for use in drawworks by the oil industry. EPA believes that aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products containing asbestos could also be imported, as reported by USGS (Ref. 10) and also appear in data from ACE (Ref. 11); however, the volume of products and the quantity of asbestos within imported products is unknown. ACE is not a publicly accessible database because it contains information that is protected under the provisions of Freedom of Information Act (5 U.S.C. 552), the Privacy Act (5 U.S.C. 552a), and the Trade Secrets Act (18 U.S.C. 1905), and the information in ACE related to importer identity cannot be released.

C. What are the potential health effects of asbestos?

Asbestos was listed as a known human carcinogen in the National Toxicology Program's *First Annual Report on Carcinogens* in 1980 (Ref. 1). In 1988, EPA assessed the health hazards and effects caused by exposure to asbestos under the Integrated Risk Information System (IRIS) program, and determined that asbestos exposure can lead to lung cancer and mesotheliomas (tumors arising from the thin membranes that line internal organs) (Ref. 2). Many authorities have established that there is causal association between asbestos and lung cancer and mesotheliomas (Ref. 1; Ref. 3; Ref. 4). EPA also noted in the *Scope of the Risk Evaluation for Asbestos* that there is a causal association between exposure to asbestos and cancer of the larynx and cancer of the ovary (Ref. 4). There is also suggestive evidence of a positive association between asbestos and cancer of the pharynx (Ref. 4; Ref. 12), stomach (Ref. 3; Ref. 4), and colorectum (Ref. 1; Ref. 3; Ref. 4; Ref. 12; Ref. 13; Ref. 14). All types of asbestos fibers have been reported to cause mesothelioma. (Ref. 4).

Increases in lung cancer mortality have been reported in both workers and residents exposed to various asbestos fiber types as well as fiber mixtures (Ref. 4). There is evidence in in-vitro, animal, and human studies that asbestos is genotoxic, meaning asbestos can damage an organism's genetic material (Ref. 3). There is also evidence that asbestos exposure is associated with adverse respiratory system effects, such as asbestosis and immunotoxicity (Ref. 3; Ref. 7).

D. What are the potential routes and sources of exposure to asbestos?

The greatest risk of exposure to asbestos occurs when the substance is in a friable state, meaning the fibers can be crumbled, pulverized or reduced to a powder under hand pressure (Ref. 3). During use and over time, non-friable asbestos has the potential to become friable (Ref. 3). For example, testing has shown that non-friable asbestos-containing material can become friable during use such as cutting, crumbling, and tearing, and as a result of such use, asbestos fibers can be released into the air (Ref. 15). Similarly, non-friable asbestos-containing building materials can release fibers if disturbed during building repair or demolition (Ref. 16). Exposures to workers, consumers and the general population, as well as environmental receptors, may occur from industrial releases and use of asbestos-containing products. Based on EPA's research conducted during the early stages of the TSCA risk evaluation, most of the ongoing uses of asbestos pertain to industrial and commercial uses (Ref. 7).

The primary exposure route for asbestos is inhalation. Asbestos fibers can be released into the air during processing of raw bulk asbestos and asbestos-containing products. Weathering and the disturbance and/or degradation of asbestos-containing products can also cause asbestos fibers to be suspended in air (Ref. 3). Fibers can then enter the lungs through inhalation. Exposures to asbestos can potentially occur via oral and dermal routes; however, EPA anticipates that the most likely exposure route is inhalation.

III. Rationale and Objectives

A. Rationale

EPA is concerned about the potential for adverse health effects of asbestos based on established sound scientific data indicating that asbestos is a known human carcinogen. Asbestos was listed as a human carcinogen in the National Toxicology Program's *First Annual Report on Carcinogens* in 1980 (Ref. 1).

Asbestos, in particular chrysotile asbestos, has several unique properties, including low electrical conductivity while maintaining high tensile strength, high friction coefficient, and high resistance to heat (Ref. 17). These properties made asbestos ideal for use in friction materials (*e.g.*, brakes), insulation (*e.g.*, sound, heat, and electrical), and building materials (*e.g.*, cement pipes, roofing compounds, flooring) over the past century. However, the use of asbestos has declined dramatically due to health concerns and consumer preference (Ref. 17), which has led to the elimination of some exposure scenarios associated with such uses. According to USGS, in 1973, national consumption, including manufacturing/importing and processing, of raw bulk asbestos peaked around 800,000 metric tons and has since fallen approximately 99 percent to between 300 and 800 metric tons in recent years (Ref. 9). Today, most manufactured products in the United States are now asbestos-free (Ref. 17).

In 1989, EPA published a final rule *Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions* (54 FR 29460, July 12, 1989) (FRL–3476–2), which was intended "to prohibit, at staged intervals, the future manufacture, importation, processing and distribution in commerce of asbestos in almost all products, as identified in the rule . . ." and to "reduce the unreasonable risks presented to human health by exposure to asbestos during activities involving these products." The 1989 final rule applied to the asbestos product categories identified in the *Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products,* which was conducted in support of the rule (Ref. 20). However, the ban against most of the asbestos product categories was overturned by the Fifth Circuit Court of Appeals in 1991. In addition to the asbestos products that remain banned after the court ruling, which are identified in Table 1 below, any new use of asbestos was also banned. The prohibition on any new uses of asbestos is for uses initiated for the first time after August 25, 1989. As a point of clarification, in this proposed rulemaking, a significant new use of asbestos addresses multiple uses that were initiated prior to August 25, 1989, for which manufacturing and processing are no longer ongoing in the United States.

TABLE 1—ASBESTOS CONTAINING PRODUCT CATEGORIES BANNED UNDER TSCA SECTION 6

Product category	Definition (40 CFR 763.163)
Corrugated Paper	Corrugated paper means an asbestos-containing product made of corrugated paper, which is often cemented to a flat backing, may be laminated with foils or other materials, and has a corrugated surface. Major applications of asbestos corrugated paper include: Thermal insulation for pipe coverings; block insulation; panel insulation in elevators; insulation in appliances; and insulation in low-pressure steam, hot water, and process lines.
Rollboard	Rollboard means an asbestos-containing product made of paper that is produced in a continuous sheet, is flexible, and is rolled to achieve a desired thickness. Asbestos rollboard consists of two sheets of asbestos paper laminated together. Major applications of this product include: Office partitioning; garage paneling; linings for stoves and electric switch boxes; and fire-proofing agent for security boxes, safes, and files.
Commercial Paper	Commercial paper means an asbestos-containing product that is made of paper intended for use as general insulation paper or muffler paper. Major applications of commercial papers are insulation against fire, heat transfer, and corrosion in circumstances that require a thin, but durable, barrier.
Specialty Paper	Specialty paper means an asbestos-containing product that is made of paper intended for use as filters for beverages or other fluids or as paper fill for cooling towers. Cooling tower fill consists of asbestos paper that is used as a cooling agent for liquids from industrial processes and air conditioning systems.
Flooring Felt	Flooring felt means an asbestos-containing product that is made of paper felt intended for use as an underlayer for floor coverings, or to be bonded to the underside of vinyl sheet flooring.
New Uses*	The commercial uses of asbestos not identified in § 763.165 the manufacture, importation or processing of which would be initiated for the first time after August 25, 1989.

* **Note:** A "new use" as defined in 40 CFR 763.163 is distinct from a significant new use per TSCA section 5(a)(2), which is explained for the purposes of this proposed rule in Table 2.

As part of the information gathering activity associated with the current asbestos risk evaluation, the Agency researched market availability for the asbestos product categories subject to the 1989 asbestos ban and phase-out rule that was later overturned. EPA identified several asbestos product categories where manufacturing (including importing) and processing for the use is no longer ongoing. Through further refinement of the *Scope of the Risk Evaluation for Asbestos,* the Agency determined that asbestos-containing cement products (*e.g.,* pipe, shingles and replacement parts) are the only condition of use of asbestos in building materials; therefore, this proposed SNUR also applies to all asbestos-containing building materials other than asbestos cement products. These product categories and descriptions are listed in Table 2, and manufacturing and processing for these product categories are significant new uses subject to this proposed rulemaking. The product category descriptions are based on the product category descriptions presented in the *Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products* for the 1989 final rule (Ref. 20) and may not be all-encompassing.

TABLE 2—PRODUCT CATEGORIES OF PROPOSED SIGNIFICANT NEW USES OF ASBESTOS

Product category	Description of the product category
Arc Chutes	Ceramic arc chutes containing asbestos were used to guide electric arcs in motor starter units in electric generating plants.
Beater-Add Gaskets	Asbestos fibers were incorporated within various elastomeric binders and other fillers to form the beater-add paper. These products were used extensively for internal combustion applications and for the sealing component of spiral wound gaskets. Gaskets were used to seal one compartment of a device from another in non-dynamic applications such as engine and exhaust manifolds.
Extruded Sealant Tape and Other Tape.	Sealant tape was made from a semi-liquid mixture of butyl rubber and asbestos. On exposure to air, the sealant solidified forming a rubber tape about an inch wide and an eighth of an inch thick. The tape acted as a gasket for sealing building windows, automotive windshields, and mobile home windows. It was also used in the manufacture of parts for the aerospace industry and in the manufacture of insulated glass.
Filler for Acetylene Cylinders	Asbestos was used to produce a sponge-like filler, which held the liquefied acetylene gas (acetone) in suspension in the steel cylinder and puled the acetone up through the tank as the gas was released through the oxyacetylene torch. The torch was used to weld or cut metal and sometimes used as an illuminant gas. The filler also acted as an insulator that offered fire protection in case the oxidation of the acetylene became uncontrollable.
High-Grade Electrical Paper	The major use of asbestos electrical paper was insulation for high temperature, low voltage applications such as in motors, generators, transformers, switch gears, and other heavy electrical apparatuses.
Millboard	Asbestos millboard was essentially a heavy cardboard product that was used for gasketing, insulation, fireproofing, and resistance against corrosion and rot. Millboard was used in many industrial applications to include linings in boilers, kilns, and foundries; insulation in glass tank crowns, melters, refiners, and sidewalls in the glass industry; linings for troughs and covers in the aluminum, marine, and aircraft industries; and thermal protection in circuit breakers in the electrical industry. In addition, thin millboard was inserted between metal to produce gaskets. Commercial applications for millboard included fireproof linings for safes, dry-cleaning machines, and incinerators.
Missile Liner	A missile liner was an asbestos and rubber compound used to insulate the outer casing of the rocket from the intense heat generated in the rocket motor while the rocket fuel was burned. Rockets and rocket boosters were used to propel a number of objects including military weapons and the space shuttle.

TABLE 2—PRODUCT CATEGORIES OF PROPOSED SIGNIFICANT NEW USES OF ASBESTOS—Continued

Product category	Description of the product category
Adhesives, Sealants, and Roof and Non-Roof Coatings.	The automobile industry historically used asbestos in a wide variety of adhesive, sealant, and coating applications. The aerospace industry used asbestos in extremely specialized applications such as firewall sealants and epoxy adhesives. Non-roof coatings were used to prevent corrosion (*e.g.*, as vehicle undercoatings and underground pipe coatings). Roof coatings were used to repair and patch roofs, seal around projections such as chimneys and vent pipes, and bond horizontal and vertical surfaces.
Pipeline Wrap	Pipeline wrap was an asbestos felt product primarily used by the oil and gas industry for coating its pipelines. Asbestos pipeline wrap was also used in the coal tar enamel method of coating pipes, some above-ground applications (such as for special piping in cooling towers), and was also used by the chemical industry for underground hot water and steam piping.
Reinforced Plastics	Asbestos-reinforced plastics were used for electro-mechanical parts in the automotive and appliance industries and as high-performance plastics for the aerospace industry. Asbestos-reinforced plastic was typically a mixture of some type of plastic resin (usually phenolic or epoxy), a general filler (often chalk or limestone), and raw asbestos fiber.
Roofing Felt	Asbestos roofing felt was single or multi-layered grade and used for built-up roofing. Asbestos was used in roofing felts because of its dimensional stability and resistance to rot, fire, and heat.
Separators in Fuel Cells and Batteries.	In very specialized aerospace applications, asbestos functioned as an insulator and separator between the negative and positive terminals of a fuel cell/battery.
Vinyl-Asbestos Floor Tile	Vinyl-asbestos floor tile was used in commercial, residential, and institutional buildings in heavy traffic areas such as supermarkets, department stores, commercial plants, kitchens, and "pivot points"—entry ways and areas around elevators
Any Other Building Materials (other than cement)*.	Examples include insulation, plasters, mastics, textured paints (*e.g.*, simulates stucco), and block filler paints (*e.g.*, for coating masonry).

* **Note:** Not a product category described in the same terms in the Regulatory Impact Analysis; this broader product category is used generally to describe a number of specific product categories identified during the TSCA section 6 risk evaluation process.

As part of the current asbestos risk evaluation process, the Agency identified conditions of use to be considered under the TSCA risk evaluation. Those include: Imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production and several imported chrysotile asbestos-containing materials including sheet gaskets for use in titanium dioxide chemical production, brake blocks for use in oil drilling, aftermarket automotive brakes/linings and other vehicle friction products, other gaskets and packing, cement products, and woven products. These ongoing uses identified by EPA are not among the significant new uses identified in this proposal and therefore would not require a significant new use notification submission to the Agency. EPA requests comment regarding any ongoing uses not identified by the Agency and welcomes specific and verifiable documentation. EPA also requests comment on additional uses not identified as no longer ongoing.

In the absence of this proposed rule, the importing or processing of asbestos (including as part of an article) for the significant new uses proposed in this rule may begin at any time, without prior notice to EPA. Thus, EPA is concerned that commencement of the manufacturing (including importing) or processing for the significant new uses of asbestos identified in Table 2 could significantly increase the volume of manufacturing (including importing) and processing of asbestos as well as the magnitude and duration of exposure to humans over that which would otherwise exist currently. EPA has preliminarily concluded that action on this chemical substance is warranted and therefore proposes that any manufacturing (including importing) or processing of asbestos (including as part of an article), using the definition under Title II of TSCA, for any use identified in Table 2 would be a significant new use.

Consistent with EPA's past practice for issuing SNURs under TSCA section 5(a)(2), EPA's decision to propose a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use. If a person decides to begin manufacturing (including importing) or processing asbestos (including as part of an article) for a use identified in Table 2, the notice to EPA allows the Agency to evaluate the use according to the specific parameters and circumstances surrounding the conditions of use.

B. Rationale for Making Inapplicable the Exemption at 40 CFR 721.45(f) for Persons Who Import or Process Asbestos

Chemical substances that are part of an article may still result in exposure if the chemical substance has certain physical-chemical properties—as in the case of asbestos, fibers can degrade with use and become friable over time where human exposures can occur leading to increased risks for disease (Ref. 3; Ref. 15; Ref. 16). During use and over time, non-friable asbestos has the potential to become friable (Ref. 3). For example, testing has shown that non-friable asbestos-containing material can become friable during use such as cutting, crumbling, and tearing, and as a result of such use, asbestos fibers can be released into the air (Ref. 15). Similarly, non-friable asbestos-containing building materials can release fibers if disturbed during building repair or demolition (Ref. 16). Therefore, EPA is proposing to make inapplicable the exemption at 40 CFR 721.45(f) for persons who import or process any asbestos as part of an article for the proposed significant new uses, which are identified in Table 2. A person who imports or processes asbestos (including as part of an article) for a proposed significant new use identified in Table 2 would be subject to the significant new use notification requirements in this proposed rule. No person would be able to begin importing or processing asbestos (including as part of an article) for a proposed significant new use without first submitting a SNUN to EPA and until the Agency has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

As requested in Unit XII., EPA asks for comment on the Agency's understanding of ongoing uses. When submitting a comment to the Agency, EPA requests specific and verifiable information that provides evidence of ongoing uses beyond those identified in this proposed rule.

C. Objectives

Based on the considerations in Unit III.A., EPA wants to achieve the following objectives with regard to the significant new use of asbestos (including as part of an article) as designated in this proposed rule:

1. EPA would receive notice of any person's intent to manufacture (including import) or process asbestos (including as part of an article) for the described significant new use before that activity begins.

2. EPA would have an opportunity to review and evaluate data submitted in a SNUN before the notice submitter begins manufacturing (including importing) or processing asbestos (including as part of an article) for the described significant new use.

3. EPA would be able to either determine that the significant new use is not likely to present an unreasonable risk, or take necessary regulatory action associated with any other determination before the described significant new use of asbestos (including as part of an article) occurs.

IV. Significant New Use Determination

Section 5(a)(2) of TSCA states that EPA's determination that a use of a chemical substance is a significant new use must be made after consideration of all relevant factors including:

1. The projected volume of manufacturing and processing of a chemical substance.

2. The extent to which a use changes the type or form of exposure of human beings or the environment to a chemical substance.

3. The extent to which a use increases the magnitude and duration of exposure of human beings or the environment to a chemical substance.

4. The reasonably anticipated manner and methods of manufacturing, processing, distribution in commerce, and disposal of a chemical substance.

In addition to these factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

Both federal and state environmental protection agencies and occupational safety and health organizations provide existing regulation pertaining to certain aspects of the manufacturing (including importing), processing, use, and/or disposal of asbestos in order to protect consumers, workers, and the environment. EPA believes the significant new uses of asbestos identified in Table 2 could increase the volume of manufacturing (including importing) and processing of asbestos, as well as the duration and magnitude of human and environmental exposure to the substance, reverse the declining trend of national import volumes of the substance, and reintroduce exposure scenarios that have become obsolete over the past several decades. It is imperative that EPA be notified of any intended significant new use of asbestos identified in Table 2 and be provided the opportunity to evaluate such proposed new use. Once a SNUR is finalized, failure to notify EPA and file a SNUN prior to manufacturing or processing for the significant new uses would constitute a violation of TSCA and would be subject to penalties, accordingly.

To determine what would constitute a significant new use of asbestos as discussed in this unit, EPA considered relevant information about the toxicity or expected toxicity of the substance, likely human exposures and environmental releases associated with possible uses, and the four factors listed in Section 5(a)(2) of TSCA. In addition to these factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

The article exemption at 40 CFR 721.45(f) is based on an assumption that people and the environment will generally not be exposed to chemical substances in articles (Ref. 18). However, even when contained in an article, asbestos can become friable over time with use (Ref. 3; Ref. 15; Ref. 16). Based on this understanding, upon submission of a SNUN, EPA intends to evaluate the potential risk of exposure to human health and the environment for any proposed significant new use of asbestos (including as part of an article). This understanding warrants making the exemption at 40 CFR 721.45(f) inapplicable to importers or processors of articles containing asbestos. Considering the potential friability of asbestos, even when incorporated in articles, and the health risks associated with exposure to asbestos, EPA proposes to affirmatively find under TSCA section 5(a)(5) that notification is justified by the reasonable potential for exposure to asbestos through the articles subject to this SNUR. EPA intends to evaluate such potential uses whether in the form of an article or not before those uses would begin for any associated risks or hazards that might exist. EPA has reason to anticipate that importing or processing asbestos as part of an article would create the potential for exposure to asbestos, and that EPA should have an opportunity to review the intended use before such use could occur. Persons subject to this proposed SNUR are required to notify EPA at least 90 days prior to commencing manufacturing (including importing) or processing of the substance for the new use. This required notification provides EPA with the opportunity to evaluate an intended significant new use of the regulated chemical substance and, if necessary, an opportunity to protect against potential unreasonable risks.

V. Applicability of General Provisions

General provisions for SNURs appear under 40 CFR part 721, subpart A. These provisions describe persons subject to the rule, recordkeeping requirements, and exemptions to reporting requirements.

Provisions relating to user fees appear at 40 CFR part 700. According to 40 CFR 721.1(c), persons subject to SNURs must comply with the same notice requirements and EPA regulatory procedures as submitters of Premanufacture Notices (PMNs) under TSCA section 5(a)(1)(A). In particular, these requirements include the information submission requirements of TSCA sections 5(b) and 5(d)(1), the exemptions authorized by TSCA sections 5(h)(1), (h)(2), (h)(3), and (h)(5), and the regulations at 40 CFR part 720. Once EPA receives a SNUN, EPA must either determine that the significant new use is not likely to present an unreasonable risk of injury or take such regulatory action as is associated with an alternative determination before the manufacturing (including importing) or processing for the significant new use can commence. If EPA determines that the significant new use is not likely to present an unreasonable risk, EPA is required under TSCA section 5(g) to make public, and submit for publication in the **Federal Register**, a statement of EPA's finding.

VI. Applicability of Rule to Uses Occurring Before Effective Date of the Final Rule

EPA designates June 1, 2018 (the date of web posting of this proposed rule) as the cutoff date for determining whether the new use is ongoing. The objective of EPA's approach is to ensure that a person cannot defeat a SNUR by initiating a significant new use before the effective date of the final rule. In developing this proposed rule, EPA has recognized that, given EPA's general practice of posting proposed and final SNURs on its website a week or more in advance of **Federal Register** publication, this objective could be thwarted even before that publication.

Persons who begin commercial manufacturing (including importing) or processing of the chemical substance (to include importing or processing articles

and components thereof containing the chemical substance) for a significant new use identified as of June 1, 2018 would have to cease any such activity upon the effective date of the final rule. To resume their activities, these persons would have to first comply with all applicable SNUR notification requirements and wait until all TSCA prerequisites for the commencement of manufacturing (including importing) or processing have been satisfied (see **Federal Register** documents of April 24, 1990 (55 FR 17376) (FRL–3658–5) and November 28, 2016 (81 FR 85472) (FRL–9945–53) for additional information).

VII. Development and Submission of Information

EPA recognizes that TSCA section 5 does not usually require developing new information (*e.g.,* generating test data) before submission of a SNUN; however, there is an exception: Development of information is required where the chemical substance subject to the SNUR is also subject to a rule, order, or consent agreement under TSCA section 4 (see TSCA section 5(b)(1)). Also pursuant to TSCA section 4(h), which pertains to reduction of testing of vertebrate animals, EPA encourages consultation with the Agency on the use of alternative test methods and strategies (also called New Approach Methodologies or NAMs), if available, to generate any recommended test data. EPA encourages dialogue with Agency representatives to help determine how best the submitter can meet both the data needs and the objective of TSCA section 4(h).

In the absence of a TSCA section 4 test rule covering the chemical substance, persons are required to submit only information in their possession or control and to describe any other information known to or reasonably ascertainable by them (15 U.S.C. 2604(d); 40 CFR 721.25, and 40 CFR 720.50). However, as a general matter, EPA recommends that SNUN submitters include information that would permit a reasoned evaluation of risks posed by the chemical substance during its manufacturing (including importing), processing, use, distribution in commerce, or disposal. EPA encourages persons to consult with the Agency before submitting a SNUN. As part of this optional pre-notice consultation, EPA would discuss specific information it believes may be useful in evaluating a significant new use.

Submitting a SNUN that does not itself include information sufficient to permit a reasoned evaluation may increase the likelihood that EPA will either respond with a determination that the information available to the Agency is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use or, alternatively, that in the absence of sufficient information, the manufacturing (including importing), processing, distribution in commerce, use, or disposal of the chemical substance may present an unreasonable risk of injury.

SNUN submitters should be aware that EPA will be better able to evaluate SNUNs and define the terms of any potentially necessary controls if the submitter provides detailed information on human exposure and environmental releases that may result from the significant new uses of the chemical substance.

VIII. SNUN Submissions

EPA recommends that submitters consult with the Agency prior to submitting a SNUN to discuss what information may be useful in evaluating a significant new use. Discussions with the Agency prior to submission can afford ample time to conduct any tests that might be helpful in evaluating risks posed by the substance. According to 40 CFR 721.1(c), persons submitting a SNUN must comply with the same notice requirements and EPA regulatory procedures as persons submitting a PMN, including submission of test data on health and environmental effects as described in 40 CFR 720.50. SNUNs must be submitted on EPA Form No. 7710–25, generated using e-PMN software, and submitted to the Agency in accordance with the procedures set forth in 40 CFR 721.25 and 40 CFR 720.40. E–PMN software is available electronically at *http://www.epa.gov/opptintr/newchems.*

IX. Economic Analysis

A. SNUNs

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers (including importers) and processors of the chemical substance included in this proposed rule (Ref. 8). In the event that a SNUN is submitted, average costs are estimated at approximately $9,937 per SNUN submission for large business submitters and $7,537 for small business submitters. These estimates include the cost to prepare and submit the SNUN, and the payment of a user fee. Businesses that submit a SNUN would be subject to either a $2,500 user fee required by 40 CFR 700.45(b)(2)(iii), or, if they are a small business with annual sales of less than $40 million when combined with those of the parent company (if any), a reduced user fee of $100 (40 CFR 700.45(b)(1)). On February 26, 2018, EPA proposed raising the fee for SNUNs to $2,800 for small businesses and $16,000 for other businesses (83 FR 8212). Further, on November 30, 2017, EPA determined that revisions to the current small business size standards for TSCA reporting and recordkeeping requirements are warranted (82 FR 56824). Businesses that submit a SNUN are also estimated to incur average costs of $67 for rule familiarization. First time submitters will incur an average cost of $128 for Central Data Exchange (CDX) registration and associated activities. Companies manufacturing, importing, or processing asbestos or articles containing asbestos will incur an average cost of $80 for notifying their customers of SNUR regulatory activities.

The costs of submitting a SNUN will not be incurred by any company unless a company decides to pursue a significant new use as defined in this proposed SNUR. Additionally, these estimates reflect the costs and fees as they are known at the time this rule is promulgated. EPA's complete economic analysis is available in the public docket for this proposed rule (Ref. 8).

B. Export Notification

Under Section 12(b) of TSCA and the implementing regulations at 40 CFR part 707, subpart D, exporters must notify EPA if they export or intend to export a chemical substance or mixture for which, among other things, a rule has been proposed or promulgated under TSCA section 5. As explained in Unit I., export notifications are required for asbestos, but not for articles containing asbestos. EPA is not proposing that asbestos-containing articles be subject to the export notification requirements; therefore, EPA assumes no additional costs under TSCA section 12(b) for this proposed rule.

In general, for persons exporting a substance that is the subject of a SNUR, a one-time notice to EPA must be provided for the first export or intended export to a particular country. The total costs of export notification will vary by chemical, depending on the number of required notifications (*i.e.,* the number of countries to which the chemical is exported). While EPA is unable to make any estimate of the likely number of export notifications for the chemical covered in this proposed SNUR, as stated in the accompanying economic analysis of this proposed SNUR, the estimated cost of the export notification

requirement on a per unit basis is approximately $96.

C. Import or Processing Chemical Substances as Part of an Article

In making inapplicable the exemption relating to persons that import or process certain chemical substances as part of an article, this action may affect firms that plan to import or process types of articles that may contain the asbestos. Some firms have an understanding of the contents of the articles they import or process. However, EPA acknowledges that importers and processors of articles may have varying levels of knowledge about the chemical content of the articles that they import or process. These parties may need to become familiar with the requirements of the rule. And, while not required by the SNUR, these parties may take additional steps to determine whether the subject chemical substance is part of the articles they are considering for importing or processing. This determination may involve activities such as gathering information from suppliers along the supply chain and/or testing samples of the article itself. Costs vary across the activities chosen and the extent of familiarity a firm has regarding the articles it imports or processes. Cost ranges are presented in the Understanding the Costs Associated with Eliminating Exemptions for Articles in SNURs (Ref. 19). Based on available information, EPA believes that article importers or processors that choose to investigate their products would incur costs at the lower end of the ranges presented in the Economic Analysis. For those companies choosing to undertake actions to assess the composition of the articles they import or process, EPA expects that importers or processors would take actions that are commensurate with the company's perceived likelihood that a chemical substance might be a part of an article for the significant new uses subject to this proposed rulemaking (identified in Table 2) and the resources it has available. Example activities and their costs are provided in the accompanying Economic Analysis of this proposed rule (Ref. 8).

X. Alternatives

Before proposing this SNUR, EPA considered the following alternative regulatory action: Promulgate a TSCA section 8(a) Reporting Rule.

Under a TSCA section 8(a) rule, EPA could, among other things, generally require persons to report information to the Agency when they intend to manufacture (including import) or process a listed chemical for a specific use or any use. However, for asbestos, the use of TSCA section 8(a) rather than SNUR authority would have several limitations. First, if EPA were to require reporting under TSCA section 8(a) instead of TSCA section 5(a), that action would not ensure that EPA receives timely advance notice of future manufacturing (including importing) or processing of asbestos (including as part of an articles and components thereof) for new uses that may produce changes in human and environmental exposures. Nor would action under 8(a) ensure that an appropriate determination (relevant to the risks of such manufacturing (including importing) or processing) has been issued prior to the commencement of such manufacturing (including importing) or processing. Furthermore, a TSCA section 8(a) rule would not ensure that manufacturing (including importing) or processing for the significant new use cannot proceed until EPA has responded to the circumstances by taking the required actions under Sections 5(e) or 5(f) of TSCA in the event that EPA determines any of the following: (1) That the significant new use presents an unreasonable risk under the conditions of use (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); (2) that the information available to EPA is insufficient to permit a reasoned evaluation of the health and environmental effects of the significant new use; (3) that in the absence of sufficient information, the manufacture (including import), processing, distribution in commerce, use, or disposal of the substance, or any combination of such activities, may present an unreasonable risk (without consideration of costs or other non-risk factors, and including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by EPA); or (4) that there is substantial production and sufficient potential for environmental release or human exposure (as defined in TSCA section 5(a)(3)(B)(ii)(II)).

In addition, EPA may not receive important information from small businesses, because such firms generally are exempt from TSCA section 8(a) reporting requirements (see TSCA sections 8(a)(1)(A) and 8(a)(1)(B)). In view of the level of health concerns about asbestos if used for a proposed significant new use, EPA believes that a TSCA section 8(a) rule for this substance would not meet EPA's regulatory objectives.

XI. Scientific Standards, Evidence, and Available Information

EPA has used scientific information, technical procedures, measures, methods, protocols, methodologies, and models consistent with the best available science, as applicable. These sources supply information relevant to whether a particular use would be a significant new use, based on relevant factors including those listed under TSCA section 5(a)(2). As noted in Unit III., EPA's decision to promulgate a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use.

The clarity and completeness of the data, assumptions, methods, quality assurance, and analyses employed in EPA's decision are documented, as applicable and to the extent necessary for purposes of this proposed significant new use rule, in Unit II. and in the references cited throughout the preamble of this proposed rule. EPA recognizes, based on the available information, that there is variability and uncertainty in whether any particular significant new use would actually present an unreasonable risk. For precisely this reason, it is appropriate to secure a future notice and review process for these uses, at such time as they are known more definitively. The extent to which the various information, procedures, measures, methods, protocols, methodologies or models used in EPA's decision have been subject to independent verification or peer review is adequate to justify their use, collectively, in the record for a significant new use rule.

XII. Request for Comment

A. Do you have comments or information about ongoing uses?

EPA welcomes comment on all aspects of this proposed rule. EPA based its understanding of the use profile of this chemical on the published literature, the 2016 Chemical Data Reporting submissions, market research, review of Safety Data Sheets, and extensive research conducted during the early stages of the TSCA risk evaluation for asbestos. To confirm EPA's understanding, the Agency is requesting public comment on all aspects of this proposed rule. In providing comments on an ongoing use of asbestos, it would be helpful to provide specific information and documentation sufficient for EPA to substantiate any assertions of use.

B. What should I consider as I prepare my comments for EPA?

1. *Submitting CBI.* It is EPA's policy to include all comments received in the public docket without change or further notice to the commenter and to make the comments available online at *www.regulations.gov,* including any personal information provided, unless a comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit this information to EPA through *regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM that you mail to EPA as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2, subpart B.

2. *Tips for preparing your comments.* When preparing and submitting your comments, see the commenting tips at *http://www2.epa.gov/dockets/commenting-epa-dockets#tips.*

XIII. References

The following is a listing of the documents that are specifically referenced in this document. The docket, EPA–HQ–OPPT–2018–0159, includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT.**

1. National Toxicology Program. (NTP, 2016). Report on Carcinogens, Fourteenth Edition.; Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service. Retrieved from *https://ntp.niehs.nih.gov/ntp/roc/content/profiles/asbestos.pdf.*
2. U.S. Environmental Protection Agency. (EPA, 1988). IRIS summary for asbestos (CASRN 1332–21–4). Washington, DC: Integrated Risk Information System. Retrieved from *http://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0371_summary.pdf.*
3. Agency for Toxic Substances and Disease Registry. (ATSDR, 2001). Toxicological profile for asbestos (update). Retrieved from *https://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=30&tid=4.*
4. International Agency for Research on Cancer. (IARC, 2012). A review of human carcinogens. Part C: Arsenic, metals, fibres, and dusts [IARC Monograph]. Lyon, France: World Health Organization. Retrieved from *http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C.pdf.*
5. International Agency for Research on Cancer. (IARC, 1977). IARC monographs on the evaluation of carcinogenic risk of chemicals to man: Asbestos. Lyon, France: World Health Organization. Retrieved from *http://monographs.iarc.fr/ENG/Monographs/vol1-42/mono14.pdf.*
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7. U.S. Environmental Protection Agency. (EPA, 2017). Scope of the Risk Evaluation for Asbestos. Retrieved from *https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0736-0086.*
8. U.S. Environmental Protection Agency. (EPA, 2018). Economic Analysis for the Proposed Significant New Use Rule for Asbestos.
9. U.S. Geological Survey. (USGS, 2018). Mineral Commodity Summaries 2018. Washington, DC: U.S. Department of the Interior. Retrieved from *https://minerals.usgs.gov/minerals/pubs/mcs/2018/mcs2018.pdf.*
10. U.S. Geological Survey. (USGS, 2017). Mineral Commodity Summaries: Asbestos. Retrieved from *https://minerals.usgs.gov/minerals/pubs/commodity/asbestos/mcs-2017-asbes.pdf.*
11. U.S. Customs and Border Protection. (2017). *Automated Commercial Environment System (ACE).*
12. National Research Council. (NRC, 2006). Asbestos: Selected cancers. Institute of Medicine (US) Committee on Asbestos: Selected Health Effects. Washington, DC: The National Academies Press.
13. National Research Council. (NRC, 1983). Drinking Water and Health. Washington, DC: Safe Drinking Water Committee, Board on Toxicology and Environmental Health Hazards. Retrieved from *http://dx.doi.org/10.17226/326.*
14. U.S. Environmental Protection Agency. (EPA, 1980). Ambient water quality criteria for asbestos [EPA Report]. (EPA/440/5–80/022). Washington, DC.
15. Anderson, P.H. and Farino, W.J. (1982). Analysis of Fiber Release from Certain Asbestos Products. Draft Final Report. Prepared by GCA Corporation for the U.S. Environmental Protection Agency. Retrieved from *https://nepis.epa.gov/Exe/ZyPDF.cgi/9101PBZ6.PDF?Dockey=9101PBZ6.PDF.*
16. 40 CFR part 61, subpart M, Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP).
17. Virta, R. (2011). Asbestos. Kirk-Othmer Encyclopedia of Chemical Technology. Retrieved from *http://onlinelibrary.wiley.com/doi/10.1002/0471238961.01190205 10151209.a01.pub3/pdf.*
18. U.S. Environmental Protection Agency. (EPA, 1984). Significant New Uses of Chemical Substances; Certain Chemicals. 49 FR 35014, September 5, 1984 (FRL–2541–8).
19. U.S. Environmental Protection Agency. (EPA, 2013). Understanding the Costs Associated with Eliminating Exemptions for Articles in SNURs. May 1, 2013.
20. U.S. Environmental Protection Agency. (EPA, 1989). Regulatory Impact Analysis of Controls on Asbestos and Asbestos Products: Final Report: Volume III. (5601989ICF001). Washington, DC: Office of Toxic Substances, U.S. Environmental Protection Agency.

XIV. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is not expected to be a regulatory action subject to Executive Order 13771 (82 FR 9339, February 3, 2017), because this action is not a significant regulatory action under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA, 44 U.S.C. 3501 *et seq.* Burden is defined in 5 CFR 1320.3(b). The information collection activities associated with existing chemical SNURs are already approved under OMB control number 2070–0038 (EPA ICR No. 1188); and the information collection activities associated with export notifications are already approved under OMB control number 2070–0030 (EPA ICR No. 0795). If an entity were to submit a SNUN to the Agency, the burden is estimated to be approximately 100 hours per response

(slightly less for submitters who have already registered to use the electronic submission system).

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information that requires OMB approval under the PRA, unless it has been approved by OMB and displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in Title 40 of the CFR, after appearing in the **Federal Register**, are listed in 40 CFR, part 9, and included on the related collection instrument, or form, as applicable.

D. Regulatory Flexibility Act (RFA)

Pursuant to section 605(b) of the RFA, 5 U.S.C. 601 *et seq.*, I certify that promulgation of this SNUR would not have a significant economic impact on a substantial number of small entities. The rationale supporting this conclusion is as follows.

A SNUR applies to any person (including small or large entities) who intends to engage in any activity described in the rule as a "significant new use." By definition of the word "new" and based on all information currently available to EPA, it appears that no small or large entities presently engage in such activities. Since this proposed SNUR will require a person who intends to engage in such activity in the future to first notify EPA by submitting a SNUN, no economic impact will occur unless someone files a SNUN to pursue a significant new use in the future or forgoes profits by avoiding or delaying the significant new use. Although some small entities may decide to conduct such activities in the future, EPA cannot presently determine how many, if any, there may be. However, EPA's experience to date is that, in response to the promulgation of SNURs covering over 1,000 chemical substances, the Agency receives only a handful of notices per year. During the six-year period from 2005–2010, only three submitters self-identified as small in their SNUN submissions (Ref. 8). EPA believes the cost of submitting a SNUN is relatively small compared to the cost of developing and marketing a chemical new to a firm or marketing a new use of the chemical and that the requirement to submit a SNUN generally does not have a significant economic impact.

Therefore, EPA believes that the potential economic impact of complying with this proposed SNUR is not expected to be significant or adversely impact a substantial number of small entities. In a SNUR that published as a final rule on August 8, 1997 (62 FR 42690) (FRL–5735–4), the Agency presented its general determination that proposed and final SNURs are not expected to have a significant economic impact on a substantial number of small entities.

E. Unfunded Mandates Reform Act (UMRA)

Based on EPA's experience with proposing and finalizing SNURs, State, local, and Tribal governments have not been impacted by these rulemakings, and EPA does not have any reason to believe that any State, local, or Tribal government would be impacted by this rulemaking. As such, the requirements of sections 202, 203, 204, or 205 of UMRA, 2 U.S.C. 1531–1538, do not apply to this action.

F. Executive Order 13132: Federalism

This action will not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it will not have substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because it will not have any effect on tribal governments, on the relationship between the Federal Government and the Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997), because this action does not address environmental health or safety risks, and EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2–202 of the Executive Order.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have any effect on energy supply, distribution, or use.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve any technical standards, and is therefore not subject to considerations under section 12(d) of NTTAA, 15 U.S.C. 272 note.

K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

This action will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). This action does not affect the level of protection provided to human health or the environment.

List of Subjects in 40 CFR Part 721

Environmental protection, Asbestos, Chemicals, Hazardous substances, Reporting and recordkeeping requirements.

Dated: May 31, 2018.

Tala R. Henry,

Acting Director, Office of Pollution Prevention and Toxics.

Therefore, for the reasons stated in the preamble, the Environmental Protection Agency proposes that 40 CFR chapter I be amended as follows:

PART 721—SIGNIFICANT NEW USES OF CHEMICAL SUBSTANCES

■ 1. The authority citation for part 721 continues to read as follows:

Authority: 15 U.S.C. 2604, 2607, and 2625(c).

■ 2. Add § 721.11095 to subpart E to read as follows:

§ 721.11095 Asbestos.

(a) *Chemical substance and significant new use subject to reporting.* (1) The chemical substance identified as asbestos (as defined by 15 U.S.C. 2642(3) as the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite) is subject to reporting under this section for the significant new use

described in paragraph (a)(2) of this section.

(2) The significant new use is: Manufacturing (including importing) or processing for any of the following uses:

(i) Arc chutes;

(ii) Beater-add gaskets;

(iii) Extruded sealant tape and other tape;

(iv) Filler for acetylene cylinders;

(v) High grade electrical paper;

(vi) Millboard;

(vii) Missile liner;

(viii) Adhesives, sealants, roof and non-roof coatings;

(ix) Pipeline wrap;

(x) Reinforced plastics;

(xi) Roofing felt;

(xii) Separators in fuel cells and batteries;

(xiii) Vinyl-asbestos floor tile; or

(xiv) Other building products (other than cement products).

(b) *Specific requirements.* (1) Section 721.45(f) does not apply to this section. A person who intends to manufacture (including import) or process the substance identified in paragraph (a)(1) of this section for the significant new use identified in (a)(2) of this section as part of an article is subject to the notification provisions of § 721.25.

(2) [Reserved]

[FR Doc. 2018–12513 Filed 6–8–18; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Parts 10, 11, and 15

[Docket No. USCG–2018–0100]

RIN 1625–AC46

Amendments to the Marine Radar Observer Refresher Training Regulations

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard proposes to revise its merchant mariner credentialing regulations to remove obsolete portions of the radar observer requirements and harmonize the radar observer endorsement with the merchant mariner credential. Under this proposed rule, an active mariner who serves in a relevant position for 1 year in the previous 5 years using radar for navigation and collision avoidance purposes on vessels equipped with radar, or has served as a qualified instructor for a Coast Guard-approved radar course at least twice within the past 5 years, would not be required to complete a Coast Guard-approved radar refresher or re-certification course in order to renew his or her radar observer endorsement. This proposed rule would not change the existing requirements for mariners seeking an original radar observer endorsement or mariners who do not have either 1 year of relevant sea service on board radar-equipped vessels in the previous 5 years or service as a qualified instructor for a Coast Guard-approved radar course at least twice within the past 5 years. Elimination of the requirement to take a radar refresher or re-certification course every 5 years would reduce burden on affected mariners without impacting safety.

DATES: Comments and related material must be received by the Coast Guard on or before July 11, 2018.

ADDRESSES: You may submit comments identified by docket number USCG–2018–0100 using the Federal eRulemaking Portal at *http://www.regulations.gov.* See the "Public Participation and Request for Comments" portion of the **SUPPLEMENTARY INFORMATION** section for further instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: For information about this document call or email Mr. Davis Breyer, Coast Guard; telephone 202–372–1445, email *davis.j.breyer@uscg.mil.*

SUPPLEMENTARY INFORMATION:

Table of Contents for Preamble

I. Public Participation and Request for Comments
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V. Discussion of Proposed Rule
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C. Assistance for Small Entities
D. Collection of Information
E. Federalism
F. Unfunded Mandates Reform Act
G. Taking of Private Property
H. Civil Justice Reform
I. Protection of Children
J. Indian Tribal Governments
K. Energy Effects
L. Technical Standards
M. Environment

I. Public Participation and Request for Comments

The Coast Guard views public participation as essential to effective rulemaking, and will consider all comments and material received during the comment period. Your comment can help shape the outcome of this rulemaking. If you submit a comment, please include the docket number for this rulemaking, indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation.

We encourage you to submit comments through the Federal eRulemaking Portal at *http://www.regulations.gov.* If your material cannot be submitted using *http://www.regulations.gov,* contact the person in the **FOR FURTHER INFORMATION CONTACT** section of this proposed rule for alternate instructions. Documents mentioned in this proposed rule, and all public comments, are available in our online docket at *http://www.regulations.gov,* and can be viewed by following that website's instructions. Additionally, if you go to the online docket and sign up for email alerts, you will be notified when comments are posted or a final rule is published.

We accept anonymous comments. All comments received will be posted without change to *http://www.regulations.gov* and will include any personal information you have provided. For more about privacy and the docket, visit *http://www.regulations.gov/privacyNotice.*

We do not plan to hold a public meeting but we will consider doing so if public comments indicate that a meeting would be helpful. We would issue a separate **Federal Register** notice to announce the date, time, and location of such a meeting.

II. Abbreviations

BLS Bureau of Labor Statistics
CFR Code of Federal Regulations
CGAA 2015 Coast Guard Authorization Act of 2015
DHS Department of Homeland Security
FR Federal Register
MERPAC Merchant Marine Personnel Advisory Committee
MMLD Merchant Mariner Licensing and Documentation
MMC Merchant Mariner Credential
OMB Office of Management and Budget
§ Section
STCW International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended
STCW Code Seafarers' Training, Certification and Watchkeeping Code
U.S.C. United States Code

III. Basis and Purpose

The purpose of this proposed rule is to amend the radar observer endorsement requirements by removing obsolete portions and harmonizing the expiration dates of the radar observer endorsement and the merchant mariner credential (MMC).

The Coast Guard is authorized to determine and establish the experience and professional qualifications required

Message

From: Hofmann, Angela [Hofmann.Angela@epa.gov]
Sent: 4/23/2019 1:44:12 AM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Kadeli, Lek [Kadeli.Lek@epa.gov]; Wise, Louise [Wise.Louise@epa.gov]; Layne, Arnold [Layne.Arnold@epa.gov]; Morris, Jeff [Morris.Jeff@epa.gov]; Henry, Tala [Henry.Tala@epa.gov]; Hartman, Mark [Hartman.Mark@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Vendinello, Lynn [Vendinello.Lynn@epa.gov]; Canavan, Sheila [Canavan.Sheila@epa.gov]; Pierce, Alison [Pierce.Alison@epa.gov]; Blair, Susanna [Blair.Susanna@epa.gov]; Hoyt, Sarita [Hoyt.Sarita@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Lintner, Colby [Lintner.Colby@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Sisco, Debby [Sisco.Debby@epa.gov]; Kaiser, Sven-Erik [Kaiser.Sven-Erik@epa.gov]; Pritchard, Eileen [Pritchard.Eileen@epa.gov]; Tyler, Tom [Tyler.Tom@epa.gov]; Hughes, Hayley [hughes.hayley@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]
CC: Hanley, Mary [Hanley.Mary@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; OCSPP OPMO RICS [OCSPP_OPMO_RICS@epa.gov]; Berkley, Bruce [Berkley.Bruce@epa.gov]; Scott, Gregory [Scott.Gregory@epa.gov]; Weiner, Janet [Weiner.Janet@epa.gov]; Bolen, Derrick [bolen.derrick@epa.gov]; Iglesias, Ariel [Iglesias.Ariel@epa.gov]; Gorman, John [Gorman.John@epa.gov]; Mitchell, Judy-Ann [Mitchell.Judy-Ann@epa.gov]; Glynn, Tara [Glynn.Tara@epa.gov]; Wooge, William [Wooge.William@epa.gov]; LaPosta, Dore [LaPosta.Dore@epa.gov]; Malloy, Ruth [malloy.ruth@epa.gov]
Subject: OCSPP Action Highlights for Tuesday, April 23, 2019
Attachments: 2019-04-23_OCSPP-RICS-Updates-Highlights.pdf

Oops, I thought I had sent this out but I found it tonight in my draft folder. So sorry. I took a few minutes tonight to quickly add the confirmed pub dates for the 3 top priority rules from last week. Attached is the weekly highlights that RICS will mention in the meeting.
- Angela

Angela Hofmann
Director of Regulatory and Information Coordination for the Office of Chemical Safety and Pollution Prevention *(New organzation name effective 10/14/18)*
U.S. Environmental Protection Agency (EPA)
Mailcode 7101M - 1200 Pennsylvania Ave., N.W., Washington, DC 20460
Office Location: William Jefferson Clinton Building, East Room 3139L
Deliveries to RCS go to Room WJC East 3159
Phone: 202-564-0258; Email: hofmann.angela@epa.gov
http://www.epa.gov/ocspp

Message

From: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Sent: 8/8/2018 3:33:38 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Strauss, Linda [Strauss.Linda@epa.gov]
Subject: Asbestos web revisions
Attachments: Asbestos Web Edits New Use.docx

Here's what we're thinking on web revisions. See track changes of the pages in question attached. This language is pulled from the factsheet language OPA pulled together so if that changes I'll change this too. Let me know if you have thoughts. Thanks.

Cheryl Dunton
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
202-564-4893

Message

From: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Sent: 4/16/2019 7:22:59 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Hanley, Mary [Hanley.Mary@epa.gov]; Strauss, Linda [Strauss.Linda@epa.gov]; Tyler, Tom [Tyler.Tom@epa.gov]; Altieri, Sonia [Altieri.Sonia@epa.gov]
Subject: FW: Asbestos Roll-Out Status Check and Current Documents
Attachments: Asbestos SNUR press release 04 16 19 2PM.docx; Asbestos FAQ Doc 04 16 19 2PM.docx; Asbestos Infographic 4.16.2019-01.png; Asbestos_infographic-1-3.jpg; Asbestos_infographic-2-2.jpg; Asbestos_infographic-3.jpg; Asbestos_infographic-4-2.jpg; Asbestos_infographic-5-2.jpg; asbestos exclusive talkers 04 16 19 2PM.docx; Asbetos SNUR comms plan 04 16 19 2PM.docx; Asbestos web 04 16 19 2PM.docx; Asbestos Backpocket Questions 04 16 19 11AM.docx

I'm putting this packet from OPA plus the attached back pockets in your books for tonight. Later tonight/tomorrow morning, whenever I get confirmation OPA/OGC has cleared the public facing materials, I'll send you a new set of everything electronically and get you new printed materials for the morning.

Asbestos Backpocket Que...

From: Drinkard, Andrea
Sent: Tuesday, April 16, 2019 2:13 PM
To: Schiermeyer, Corry <schiermeyer.corry@epa.gov>; Konkus, John <konkus.john@epa.gov>; Beach, Christopher <beach.christopher@epa.gov>; Hewitt, James <hewitt.james@epa.gov>; Grantham, Nancy <Grantham.Nancy@epa.gov>; McFaul, Jessica <mcfaul.jessica@epa.gov>; Schwab, Justin <Schwab.Justin@epa.gov>; Lis-Coghlan, Kamila <lis-coghlan.kamila@epa.gov>; Dunn, Alexandra <dunn.alexandra@epa.gov>; Beck, Nancy <Beck.Nancy@epa.gov>
Cc: Dunton, Cheryl <Dunton.Cheryl@epa.gov>; Strauss, Linda <Strauss.Linda@epa.gov>
Subject: Asbestos Roll-Out Status Check and Current Documents

Hi all—

Thank you for your time and attention to all of the Asbestos roll-out materials. I wanted to put all of the updated documents in one place so that folks can make any necessary last minute adjustments. Please let me know ASAP if you have any edits to the press release. I will finalize the release at 4pm. For the remaining documents, please send me any edits by COB.

Thanks!

Press Release

Chris: Please have AAW review, I think we're close enough to final for his review

Asbestos SNUR press release 04 ...

FAQs (updated from proposal)

Note: I left these in track changes so everyone could see the updates OCSPP made.

Asbestos FAQ Doc 04 16 19 2PM.do...

Topline messages/Alex's talkers

asbestos exclusive talkers 04 16 19 ...

Comms Plan

James: Please let us know when you've got a confirmed list of interviews as well as the times.

Asbetos SNUR comms plan 04 1...

Infographics (both OPA and OCSPP)

Asbestos_infogr... Asbestos_infogr... Asbestos_infogr... Asbestos_infogr... Asbestos_infogr... Asbestos Infographic 4.16....

Web Updates

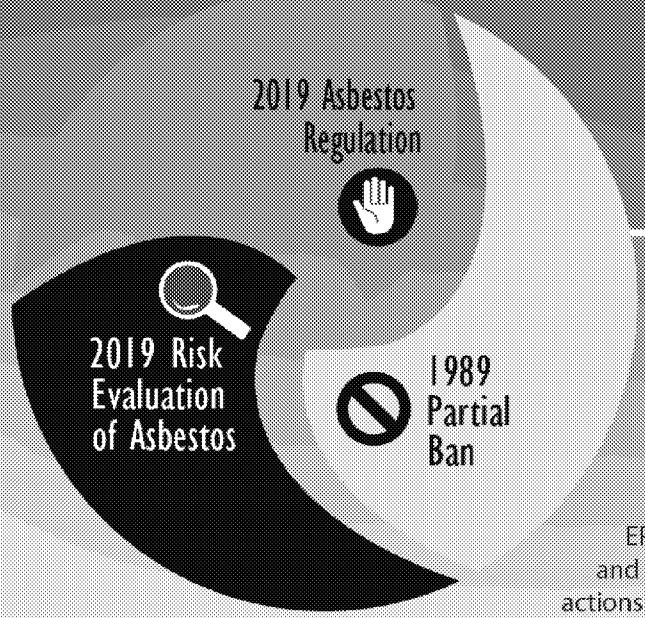
Asbestos web 04 16 19 2PM.docx

Andrea Drinkard
Senior Advisor (detail)
EPA Office of Public Affairs
Desk: 202.564.1601
Cell: 202.236.7765

EPA Actions to Protect the Public from Asbestos

The use of asbestos has dramatically declined since its peak in the 1970s. Today, there are few remaining asbestos-containing products and asbestos is no longer mined in the United States.

There are three key actions that EPA has taken or is actively working on that address asbestos-containing products.



1989 Partial Ban

An EPA rule under the Toxic Substances Control Act banned the manufacture, import, processing and distribution of some asbestos-containing products. The banned product categories include: asbestos-containing flooring felt, rollboard, and commercial, corrugated, and specialty papers. EPA also banned new uses of asbestos which prevented new asbestos products from entering the marketplace after August 25, 1989.

2019 Asbestos Regulation

A final rule that ensures that discontinued asbestos products cannot be reintroduced into commerce without the Agency evaluating them and putting in place any necessary restrictions, including prohibiting use.

2019 Risk Evaluation of Asbestos

This process under TSCA evaluates whether certain asbestos uses present an unreasonable risk of injury to health or the environment. This process must be completed before EPA is able to restrict use or ban use in any of those products, if unreasonable risk is found.

EPA also has a wide range of guidance and tools available online to help homeowners, schools, building managers, and remediation professionals safely manage, clean-up and dispose of asbestos-containing products. Together EPA's actions are ensuring public health is protected as the use of asbestos in the United States continues to decline.

EPA

www.epa.gov/asbestos

EPA's action will STOP products containing asbestos from entering or reentering the market without a robust review process that may restrict or ban their use.

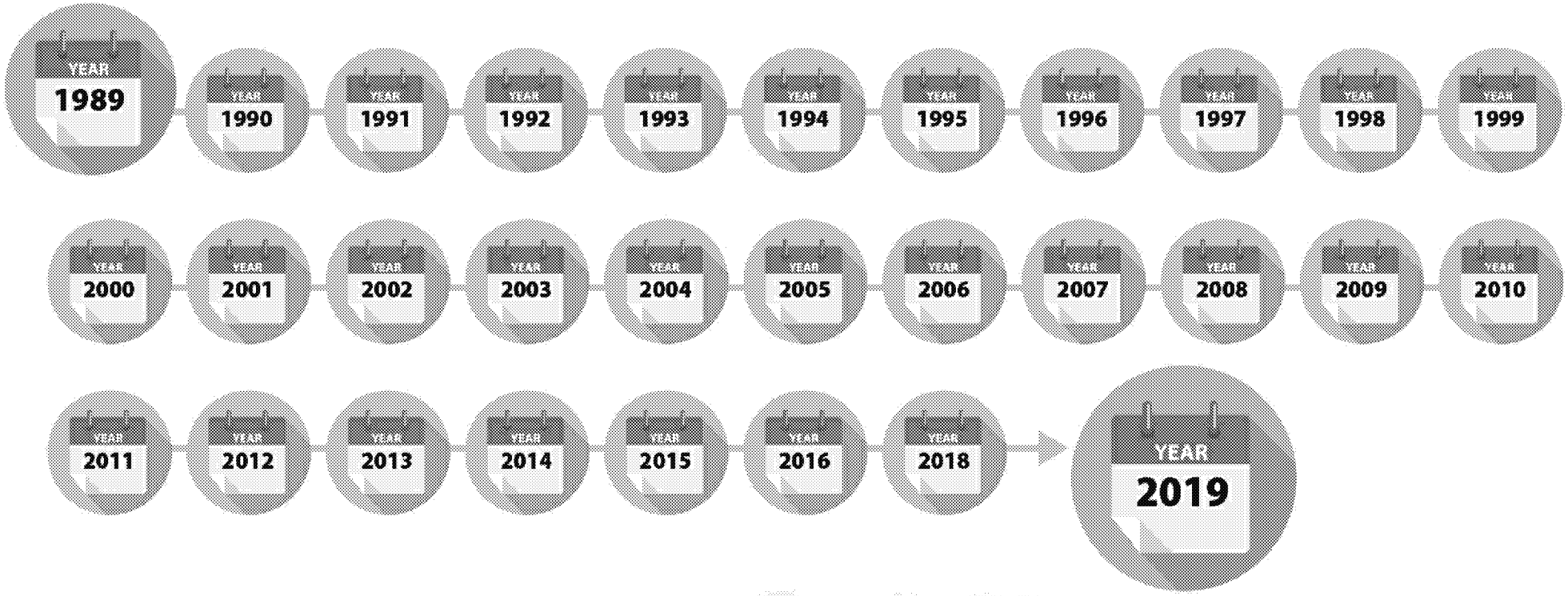
EPA

www.epa.gov

Banned Asbestos-Containing Products like flooring felt, rollboard, and commercial, corrugated, and specialty papers stay BANNED.

EPA

www.epa.gov



The Trump Administration is the first in 30 years to take action under the Toxic Substances Control Act on products that contain asbestos.

EPA

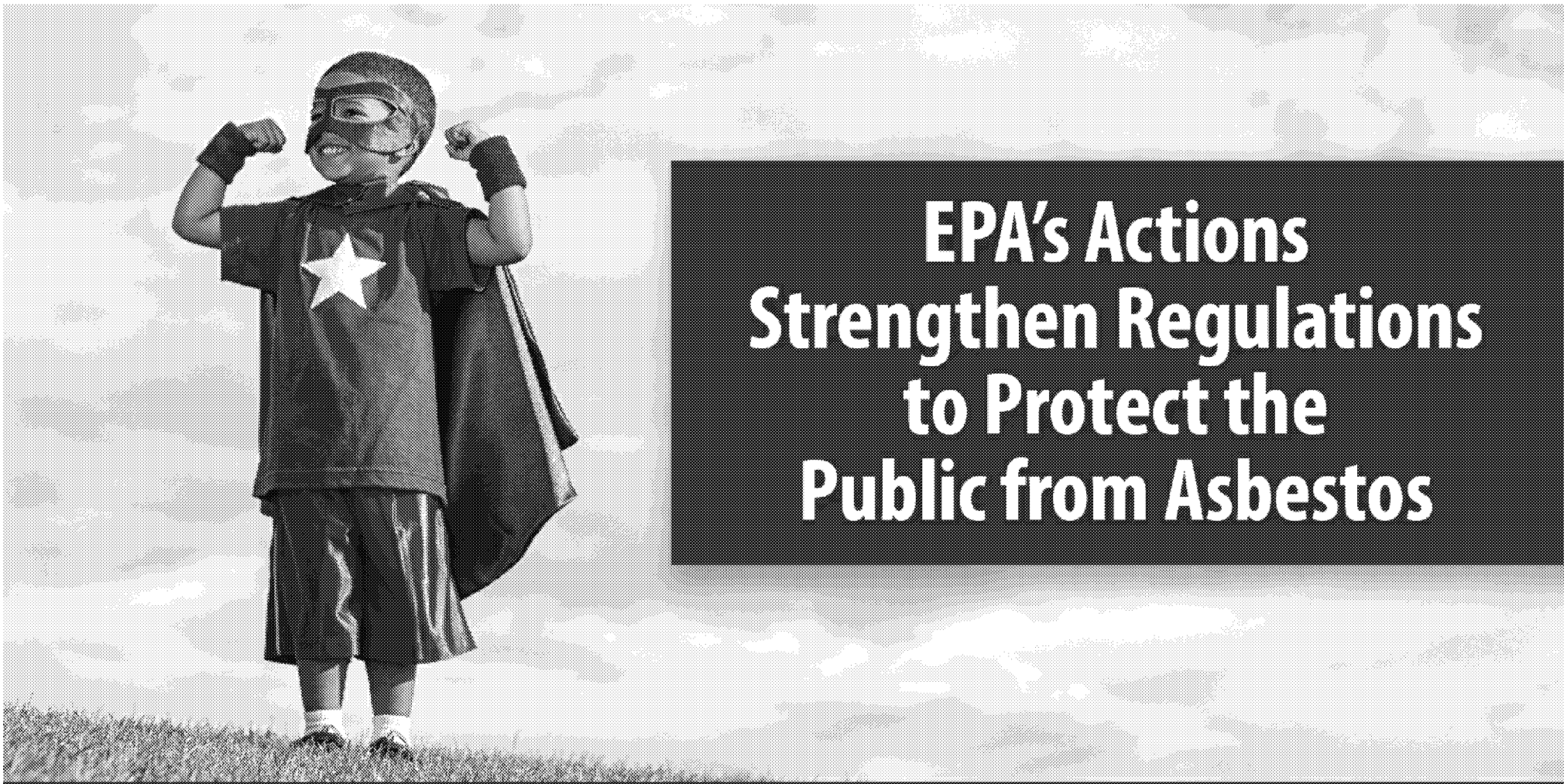
www.epa.gov

NO RUBBER STAMP!

EPA's new actions ensure there will be NO RUBBER STAMP approvals of products containing asbestos.

EPA

www.epa.gov



EPA's Actions Strengthen Regulations to Protect the Public from Asbestos

EPA

www.epa.gov

Message

From: Smith, Peterj [Smith.Peterj@epa.gov]
Sent: 12/21/2018 8:31:22 PM
To: Dunton, Cheryl [Dunton.Cheryl@epa.gov]; Hanley, Mary [Hanley.Mary@epa.gov]
CC: Pierce, Alison [Pierce.Alison@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]; Layne, Arnold [Layne.Arnold@epa.gov]; Vendinello, Lynn [Vendinello.Lynn@epa.gov]
Subject: Asbestos docs for web
Attachments: TSCA 21_Asbestos-CDR_EPA Response_2018-12-21.pdf; TSCA 21_Asbestos-CDR_EPA Response_FRdoc_2018-12-21.pdf

As promised...

Please rename if necessary and proceed with the plans for release.

Best,
Peter

****
NOTICE: *If this electronic communication explains, justifies, or documents an official action or decision, it may be subject to federal records requirements. Federal employees should evaluate the contents of this message before deleting it.*
****

Peter J. Smith | U.S. EPA | Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave., NW | Washington, DC 20460 | phone 202/564-0262 | email smith.peterj@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 21 2018

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Robert M. Sussman
ADAO Counsel
Sussman & Associates
3101 Garfield St. NW
Washington, DC 20008

Re: TSCA Section 21 Petition Concerning Asbestos and the CDR Rule

Dear Mr. Sussman:

The U.S. Environmental Protection Agency (EPA) is responding to the petition that was filed by Asbestos Disease Awareness Organization, American Public Health Association, Center for Environmental Health, Environmental Working Group, Environmental Health Strategy Center, and Safer Chemicals Healthy Families. The petition filed on September 27, 2018, under section 21 of the Toxic Substances Control Act (TSCA) asks that EPA "promptly initiate rulemaking under section 8(a) of TSCA to add asbestos to the CDR rule."

The EPA has reviewed the information submitted in your petition. Based on this review and after careful consideration of your specific requests, the EPA is denying the petition. The agency's reasons for denying your petition will be published in a forthcoming edition of the Federal Register. A pre-publication copy of that Federal Register document is enclosed.

Under TSCA section 21, you have the right to appeal the agency's denial of your petition by commencing a civil action in a U.S. district court to compel the Administrator to initiate a rulemaking proceeding to amend the CDR rule as requested in the petition within 60 days of the date of this letter. If you would like to discuss this matter further, please contact Jeff Morris, Director of the Office of Pollution Prevention and Toxics, at 202-564-6756.

Sincerely,

Nancy B. Beck, Ph.D., DABT
Principal Deputy Assistant Administrator

cc: Linda Reinstein, Asbestos Disease Awareness Organization
Donald Hoppert, American Public Health Association
Ansje Miller, Center for Environmental Health
Patrick MacRoy, Environmental Health Strategy Center
Caroline Leary, Environmental Working Group
Liz Hitchcock, Safer Chemicals, Healthy Families

Prepublication Copy Notice:

The EPA Principal Deputy Assistant Administrator for Chemical Safety and Pollution Prevention signed the following *Federal Register* document on December 21, 2018:

Title: **Asbestos; TSCA Section 21 Petition; Reasons for Agency Response**

Action: Petition; Reasons for Agency Response

FRL: 9988-56

Docket No.: **EPA-HQ-OPPT-2018-0682**

This is a **prepublication version** of the document that EPA is submitting for publication in the *Federal Register*. While the Agency has taken steps to ensure the accuracy of this prepublication version of the document, **it is not the official version** of the document for purposes of public comment or judicial review. Please refer to the official version of the document that will appear in a forthcoming *Federal Register* publication.

Once the official version of the document publishes in the *Federal Register*, the prepublication version of the document posted on the agency's internet will be replaced with a link to the document that appears in the *Federal Register* publication. At that time, you will also be able to access the on-line docket for this *Federal Register* document at http://www.regulations.gov.

For further information about the docket and, if applicable, instructions for commenting, please consult the ADDRESSES section in the front of the *Federal Register* document.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Chapter I

[EPA-HQ-OPPT-2018-0682; FRL-9988-56]

Asbestos; TSCA Section 21 Petition; Reasons for Agency Response

AGENCY: Environmental Protection Agency (EPA).

ACTION: Petition; reasons for Agency response.

SUMMARY: This document provides the reasons for EPA's response to a September 27, 2018, petition it received under the Toxic Substances Control Act (TSCA) from the following organizations: Asbestos Disease Awareness Organization, American Public Health Association, Center for Environmental Health, Environmental Working Group, Environmental Health Strategy Center, and Safer Chemicals Healthy Families ("petitioners"). Generally, the petitioners requested that EPA make multiple amendments to the Chemical Data Reporting (CDR) rule under TSCA by January 1, 2019, in order to increase the reporting of asbestos. After careful consideration, EPA denied the petition for the reasons discussed in this document.

FOR FURTHER INFORMATION CONTACT: *For technical information contact*: Tyler Lloyd, Chemical Control Division (7405M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., Washington, DC 20460-0001; telephone number: (202) 564-4016; email address: *lloyd.tyler@epa.gov.*

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554-1404; email address: *TSCA-Hotline@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

This action is directed to the public in general. This action may, however, be of particular interest to those persons who manufacture or process or may manufacture (which includes import) or process the chemical asbestos (CAS No. 1332-21-4). Since other entities may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

B. How can I access information about this petition?

The docket for this TSCA section 21 petition, identified by docket identification (ID) number EPA-HQ-OPPT-2018-0682, is available at *https://www.regulations.gov* or at the Office of Pollution Prevention and Toxics Docket (OPPT Docket), Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the OPPT Docket is (202) 566-0280. Please review the visitor instructions and additional information about the docket available at *https://www.epa.gov/dockets*.

II. TSCA Section 21

A. What is a TSCA section 21 petition?

Under TSCA section 21 (15 U.S.C. 2620), any person can petition EPA to initiate a rulemaking proceeding for the issuance, amendment, or repeal of a rule under TSCA sections 4, 6, or 8, or an order under TSCA sections 4, 5(e), or (f). A TSCA section 21 petition must set forth the facts which it is claimed establish that it is necessary to initiate the action requested.

EPA is required to grant or deny the petition with 90 days of its filing. If EPA grants the petition, the Agency must promptly commence an appropriate proceeding. If EPA denies the petition, the Agency must publish its reasons for the denial in the **Federal Register**. A petitioner may commence a civil action in a U.S. district court to compel initiation of the requested rulemaking proceeding either within 60 days of either a denial or, if EPA does not issue a decision, within 60 days of the expiration of the 90-day period.

B. What criteria apply to a decision on a TSCA section 21 petition?

TSCA section 21(b)(1) requires that the petition "set forth the facts which it is claimed establish that it is necessary to issue, amend or repeal a rule." 15 U.S.C. 2620(b)(1). TSCA section 8(a)(1) authorizes the EPA Administrator to promulgate rules under which manufacturers (including importers) and processors of chemical substances must maintain such records and submit such information as the EPA Administrator may reasonably require (15 U.S.C. 2607). TSCA section 8(a)(2) outlines the information that the EPA Administrator may require under TSCA section 8(a)(1), insofar as it is known to the person making the report or insofar as reasonably ascertainable. Under TSCA section 8(a), EPA has promulgated several data collection rules, including the Chemical Data Reporting (CDR) rule at 40 CFR part 711.

III. Summary of the TSCA Section 21 Petition

A. What action was requested?

On September 27, 2018, the Asbestos Disease Awareness Organization, American Public Health Association, Center for Environmental Health, Environmental Working Group, Environmental Health Strategy Center, and Safer Chemicals Healthy Families (petitioners) petitioned EPA to amend the CDR rule under TSCA section 8(a), within 90 days of the petition being filed, in order to increase the reporting of asbestos under the CDR rule (Ref. 1).

The petitioners requested the following specific amendments to the existing CDR rule in order to collect information for the ongoing asbestos risk evaluation being conducted under TSCA section 6(b), which is required to be completed by December 22, 2019, and, if necessary, any subsequent risk management decisions under TSCA section 6(a):

· Amend the CDR rule to require immediate submission, "from January 1, 2019, to April 31, 2019," of reports on asbestos for the 2016 reporting cycle (note: the petitioners incorrectly stated that there are 31 days in April. EPA has corrected this error throughout the remainder of this notice);

· Amend the naturally occurring chemical substance exemption at 40 CFR 711.6(a)(3) to make the exemption inapplicable to asbestos;

· Amend the articles exemption at 40 CFR 711.10(b) to require reporting pursuant to the CDR rule for all imported articles in which asbestos is present at detectable levels;

· Amend the CDR rule to exclude asbestos from the exemption at 40 CFR 711.10(c) to require the reporting of asbestos as a byproduct or impurity;

· Amend the reporting threshold for CDR at 40 CFR 711.8(b) to set a reporting threshold of 10 pounds for asbestos; and

· Amend 40 CFR 711.8 to add processors of asbestos and asbestos-containing articles as persons required to report under the CDR rule.

In addition to these amendments to the CDR rule, the petitioners requested that EPA "commit to making all reports submitted on asbestos publicly available notwithstanding any claims that these reports contain Confidential Business Information (CBI)" (Ref. 1). To disclose CBI reported under the CDR rule, the petitioners requested that EPA use its authority under TSCA section 14(d)(3) or 14(d)(7).

After submitting their petition on September 27, 2018, petitioners followed up with a subsequent email to Jeff Morris, Director of EPA's Office of Pollution Prevention and Toxics, on November 29, 2018, requesting to "incorporate in the petition by reference all the materials in EPA-HQ-OPPT-2016-0736, the docket for the TSCA Review and Risk Evaluation for asbestos" (Ref. 2). EPA has discretion (but not an obligation) to consider this type of request in this subsequent email when evaluating a petition submitted under TSCA section 21. In cases where the petitioners themselves attempt to enlarge the scope of materials under review while EPA's petition review is pending, EPA exercises its discretion to consider or not consider the additional material based on whether the material was submitted early enough in EPA's petition review process to allow adequate evaluation of the additional materials prior to the petition response deadline and the relation of the late materials to materials already submitted. In this instance, and as a threshold matter, EPA believes the petitioners have failed to set forth the facts contained in all those docket materials that they claim establish that it is necessary for EPA to amend the CDR rule in the manner requested. Indeed, they have made no showing at all in this regard. Thus, EPA believes that petitioners' attempt to supplement the petition record in this way does not fulfill the requirements of TSCA section 21(b)(1). Furthermore, EPA believes that through its evaluation of the petition, it already has, in fact, made use of the information in the docket for the TSCA Review and Risk Evaluation for asbestos, because, as discussed in Unit IV.A.i., that information informs much of EPA's understanding of the current uses of asbestos.

B. What support do the petitioners offer?

The petitioners state that TSCA section 8(a)(1) gives EPA broad authority to require manufacturers and processors of chemical substances to submit such reports as the "Administrator may reasonably require." The CDR rule, which is one of several reporting rules

promulgated under TSCA section 8, requires manufacturers (including importers) to provide EPA with information on the production and use of chemicals in commerce, generally 25,000 pounds or more of a chemical substance at any single site, with a reduced reporting threshold (2,500 pounds) applying to chemical substances subject to certain TSCA actions, including, as applicable here, TSCA section 6. As the petitioners state, "the CDR rule is EPA's primary tool under TSCA for obtaining basic information on the manufacture, importation, and use of chemicals and the nature and extent of exposure to these substances" (Ref 1).

While asbestos is already required to be reported under the CDR rule by manufacturers (including importers) meeting certain criteria, the petitioners request amendments to the CDR rule that they contend will increase the reporting of asbestos. Petitioners contend that these amendments could provide EPA with "the comprehensive information on asbestos importation and use it needs for its ongoing risk evaluation" (Ref. 1). The petitioners claim that "the [CDR] rule has played no role in informing EPA about asbestos uses that could be addressed in the Agency's TSCA risk evaluation" (Ref. 1). Petitioners add that their amendments would "maximize EPA's ability to use the information reported to conduct the ongoing risk evaluation and the subsequent risk management rulemaking under TSCA section 6(a)."

In their request, the petitioners state that "asbestos is among the most dangerous chemicals ever produced, with expert bodies agreeing that there is no safe level of exposure." The petitioners cite research finding dangers from asbestos and provide a review of asbestos assessments and regulations under TSCA. In their petition, they state that in 1989, EPA determined that "nearly all uses of asbestos presented an 'unreasonable risk of injury' under section 6 of TSCA" and assert that "the basis for this conclusion is even more compelling today" (Ref. 1).

The petitioners state their belief that EPA "lacks the basic information required for a complete and informed risk evaluation that assures that unsafe asbestos uses are removed from commerce" (Ref. 1). To support their assertion, the petitioners point to EPA's asbestos Problem Formulation (83 FR 26998, June 11, 2018) (FRL-9978–40), which, they say, "attempts to identify the asbestos uses that EPA will address in its risk evaluation but its description of these uses is limited, vague and incomplete." Moreover, the petitioners cite language in the Problem Formulation that states that "the import volume of products containing asbestos is not known" (Ref 1).

IV. Background Considerations

A. Review of EPA actions, activities, and regulations

To understand EPA's reasons for denying the petitioners' requests, it is important to first review the details of EPA's ongoing risk evaluation of asbestos, the CDR rule, exemptions under the CDR rule, and past reporting of asbestos under the CDR rule, which are explained in the following sections.

i. Risk evaluation of asbestos. On June 22, 2016, Congress passed the Frank R. Lautenberg Chemical Safety for the 21st Century Act (P.L. 114-182), which amended TSCA (15 U.S.C. 2601 et seq.). The new law includes statutory requirements related to the risk evaluations of conditions of use for existing chemicals. On December 19, 2016, in the **Federal Register**, EPA designated asbestos as one of the first 10 chemical substances subject to the Agency's initial chemical risk evaluations (81 FR 91927) (FRL-9956-47) pursuant to TSCA section 6(b)(2)(A) (15 U.S.C. 2605(b)(2)(A)), which required EPA to identify the first 10 chemicals to be evaluated no later than 180 days after the date of enactment of the Act.

EPA is currently evaluating the risks of asbestos under its conditions of use, pursuant to

TSCA section 6(b)(4)(A). Through scoping and subsequent research for the asbestos risk evaluation, EPA identified the conditions of use of asbestos, including imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production; several imported chrysotile asbestos-containing materials, including sheet gaskets for production of titanium dioxide; brake blocks for oil drilling, aftermarket automotive brakes/linings, and other vehicle friction products; other gaskets and packing; cement products; and woven products (Ref. 3). In identifying the conditions of use for asbestos and the rest of the first 10 chemicals undergoing risk evaluation under amended TSCA, EPA included use information reported under the CDR rule. In addition to using CDR data to identify the current conditions of use of asbestos, EPA conducted extensive research and outreach. This included EPA's review of published literature and online databases including Safety Data Sheets (SDSs), the United States Geological Survey's Mineral Commodities Summary and Minerals Yearbook, the U.S. International Trade Commission's Dataweb, and government and commercial trade databases. (See Docket EPA-HQ-OPPT-2016-0736). Additionally, EPA worked with its federal partners, such as Customs and Border Protection, to enhance its understanding of import information on asbestos-containing products in support of the risk evaluation.

EPA also reviewed company websites of potential manufacturers, importers, distributors, retailers, or other users of asbestos and received public comments (1) during the February 2017 public meeting on the scoping efforts for the risk evaluations for the first ten chemicals, (2) when EPA published the Scope of the Risk Evaluation for Asbestos in June 2017, and (3) when EPA published the Problem Formulation of the Risk Evaluation for Asbestos in June 2018 , all of which were used to identify the conditions of use. (See Docket EPA-HQ-OPPT-2016-0736). In addition, to inform EPA's understanding of the universe of conditions of use for asbestos for the

scope document published in June 2017, EPA convened meetings with companies, industry groups, chemical users, and other stakeholders (Ref. 3). Lastly, on June 11, 2018, EPA proposed a significant new use rule (SNUR), in an administrative proposal separate and apart from the ongoing risk evaluation process under TSCA section 6, for certain uses of asbestos (including asbestos-containing goods) (83 FR 26922; FRL-9978-76) and asked for public comment or information on ongoing uses of asbestos. In the public comments submitted on the SNUR, EPA received no new information on any ongoing uses. (See Docket EPA-HQ-OPPT-2018-0159).

In the Problem Formulation for asbestos, based on the aforementioned outreach and research, EPA did not identify any conditions of use of asbestos as a byproduct or as an impurity. As stated in EPA's Problem Formulation for asbestos (Ref. 3), EPA has identified the conditions of use as imported raw bulk chrysotile asbestos for the fabrication of diaphragms for use in chlorine and sodium hydroxide production; several imported chrysotile asbestos-containing materials, including sheet gaskets for production of titanium dioxide; brake blocks for oil drilling, aftermarket automotive brakes, linings, and other vehicle friction products; other gaskets and packing; cement products; and woven products.

The purpose of EPA's risk evaluation is to determine whether a chemical substance presents an unreasonable risk to health or the environment, under the conditions of use, including an unreasonable risk to a relevant potentially exposed or susceptible subpopulation (15 U.S.C. 2605(b)(4)(A)). As part of this process, EPA must evaluate both hazard and exposure, excluding consideration of costs or other non-risk factors, use scientific information and approaches in a manner that is consistent with the requirements in TSCA for the best available science, and ensure decisions are based on the weight-of-scientific-evidence. EPA intends to finalize the risk evaluation for asbestos by December 2019, as required by TSCA.

ii. The CDR rule. The CDR rule requires U.S. manufacturers (including importers) of chemicals on the TSCA Inventory, with some exceptions, to report to EPA every four years the identity of chemical substances manufactured (including imported) for all years since the last principal reporting year (40 CFR 711.8(a)(2)). For example, for the 2020 submission period, the principal reporting year will be 2019; the principal reporting year for the 2016 submission period was 2015. Per the CDR rule at 40 CFR 711.20, the 2020 submission period will be from June 1, 2020, to September 30, 2020, followed by EPA review and validation of the reported data before it is released to the public. Reporting during the 2020 submission period will cover the manufacture of chemicals in 2016, 2017, 2018, and 2019. To reduce reporting burden, detailed information is required only for the principal reporting year (i.e., 2019), including a breakout of the production volume to provide separate volumes for domestically manufactured and imported amounts. Generally, reporting is required for substances with production volumes of 25,000 pounds or more at any single site during any of the calendar years since the last principal reporting year. However, a lower threshold applies for chemical substances that are the subject of certain TSCA actions (see 40 CFR 711.8(b)). The CDR regulation generally exempts several groups of chemical substances from its reporting requirements, e.g., polymers, microorganisms, naturally occurring chemical substances, certain forms of natural gas, and water (see 40 CFR 711.5 and 711. 6).

iii. Exemptions from reporting under the CDR rule. In addition to the exemption for naturally occurring chemical substances, if the chemical substance is imported solely as part of an article, the chemical substance is exempt from being reported under the CDR rule (40 CFR 711.10(b)). An article is defined in 40 CFR 704.3 as "a manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end-use function(s) dependent in

whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the article, and that result from a chemical reaction that occurs upon end use of other chemical substances, mixtures, or articles; except that fluids and particles are not considered articles regardless of shape or design."

Under the CDR rule, a byproduct may be reportable when it is manufactured for a commercial purpose. The definition of manufacture for commercial purposes at 40 CFR 704.3 includes: "…substances that are produced coincidentally during the manufacture, processing, use, or disposal of another substance or mixture, including both byproducts..." Under 40 CFR 720.30(g) a byproduct is exempt from reporting if: "...its only commercial purpose is for use by public or private organizations that (1) burn it as a fuel, (2) dispose of it as a waste, including in a landfill or for enriching soil, or (3) extract component chemical substances from it for commercial purposes. (This exclusion only applies to the byproduct; it does not apply to the component substances extracted from the byproduct.)"

Impurities are exempt from CDR requirements. See 40 CFR 711.10(c) and 40 CFR 720.30(h)(1). An impurity is defined as a chemical substance unintentionally present with another chemical substance (40 CFR 704.3). Impurities are not manufactured for distribution in commerce as chemical substances per se and have no commercial purpose separate from the substance, mixture, or article of which they are a part.

Furthermore, processors do not report under the CDR rule. Processing information is reported by the manufacturers: if a manufacturer reports a chemical under the CDR rule, it must also report processing and use information for the chemical substance unless it is exempted from this reporting by 40 CFR 711.6(b).

iv. Asbestos reporting under the CDR rule. Two companies, both from the chlor-alkali industry, reported importing raw asbestos during the 2016 CDR reporting cycle (Ref. 4) and did not claim the exemption for naturally occurring substances. Both companies claimed their reports as CBI. Because asbestos has not been mined or otherwise produced in the United States since 2002 (Ref. 5), all raw asbestos used in the U.S. is imported.

V. Petition Response

A. What was EPA's response?

After careful consideration, EPA has denied the petition. A copy of the Agency's response, which consists of a letter to the signatory petitioner from the Asbestos Disease Awareness Organization (Ref. 6), is available in the docket for this TSCA section 21 petition. In accordance with TSCA section 21, the reasons for the denial are set forth in this **Federal Register** document.

B. What are the details of the petitioners' requests and EPA's decision to deny each of the requests?

This unit provides the reasons for EPA's decision to deny the petition asking EPA to amend the CDR rule and lift CBI protection for asbestos for all reports under the CDR rule.

i. Require immediate reporting of asbestos to CDR for the 2016 reporting cycle. a. Petitioners' request. The petitioners requested revisions to the CDR rule that would "trigger immediate reporting on asbestos for the 2012-2016 reporting cycle." To do this, the petitioners requested that EPA amend 40 CFR 711.20 to read: "For asbestos, the 2016 CDR submission period is from January 1, 2019 to April [30], 2019" (Ref. 1). The petitioners believe that this information will be useful to EPA in support of the ongoing asbestos risk evaluation, which is required to be completed by December 22, 2019, and any subsequent risk management

rulemakings under TSCA section 6(a).

More specifically, the request for immediate reporting was made by the petitioners to "make it possible for EPA to review and analyze the reports submitted while the risk evaluation is underway and to revise the draft evaluation on the basis of new information reported on asbestos importation and use" (Ref. 1). Additionally, the petitioners suggested that EPA "extend the completion date for the asbestos risk evaluation by six months under section 6(b)(4)(G)(ii)" to allow the Agency time to receive the new data collected under the CDR rule as proposed (Ref. 1).

b. Agency response. EPA does not believe that the requested amendments would result in the reporting of any information that is not already known to EPA. As noted in more detail in Unit IV, EPA conducted extensive research and outreach to develop its understanding of import information on asbestos-containing products in support of the ongoing asbestos risk evaluation. After more than a year of research and stakeholder outreach, EPA believes that the Agency is aware of all ongoing uses of asbestos and already has the information that EPA would receive if EPA were to amend the CDR requirements. As such, amending the CDR requirements would not provide the Agency with any additional information, and EPA does not believe it would collect information on any new ongoing uses by making the requested amendments to the CDR rule.

Furthermore, even if EPA believed that the requested amendments would collect information on any new ongoing uses, EPA would not be able to finalize such amendments in time to inform the ongoing risk evaluation or, if needed, any subsequent risk management decision(s). The petitioners stated that their requested revisions should "trigger immediate reporting on asbestos for the 2012-2016 reporting cycle" (Ref. 1). Specifically, the petitioners asked that EPA amend 40 CFR 711.20 to require reporting for the 2016 CDR submission period

(i.e., 2012-2015); they requested that this reporting be required to start on January 1, 2019, and to end on April 30, 2019.

The petitioners, however, submitted their request on September 27, 2018, less than 120 calendar days before they would like the submission period to begin. While EPA understands that petitioners desire prompt collection of the requested information under the CDR rule to inform the ongoing risk evaluation, this request does not factor in the necessary timeframes for any rulemaking processes that would be required to propose and then finalize such amendments. To allow for the notice and comment period for the public and regulated community required under the Administrative Procedure Act (5 U.S.C. 553) and for appropriate internal deliberation prior to proposal and after the close of the comment period, EPA typically needs at least 18 months to finalize a rulemaking. Furthermore, even if EPA were able to use expedited rulemaking procedures to quickly promulgate a requirement to report additional information on asbestos for the 2016 CDR cycle, it is important to note that potential reporters have had no prior notice or expectation of a need to retain the records necessary to report on past chemical manufacturing. Therefore, EPA has no reason to expect that potential reporters subject to such a rule amendment would have information that could be reasonably ascertainable for submission.

Additionally, the January through April 2019 submission period that the petitioners requested would not, in fact, provide timely information for the ongoing risk evaluation on asbestos. While the petitioners suggest that EPA "should extend the completion date for the asbestos risk evaluation by six months under section 6(b)(4)(G)(ii)" (Ref. 1), such an extension would not allow time for EPA to (1) conduct a data collection effort under the CDR rule and (2) incorporate this data into the ongoing risk evaluation prior to public comment and peer review.

Petitioners' request to extend the completion date of the final risk evaluation for asbestos

by six months would move the completion from December 2019 to June 2020. Yet, any changes to the CDR rule would need to be made by notice-and-comment rulemaking that would involve, at a minimum, five to eight months to develop the proposed rule, a 30 to 60-day comment period, and five to eight months to complete the final rule. Under this hypothetical rulemaking scenario outlined, even if the rulemaking process began in December 2018, the data elements requested by the petitioners would not result in available data until, at the very earliest, March 2020 (only three months prior to completion of the six-month deferred risk evaluation). Petitioners' request ignores the fact that the draft risk evaluation must undergo public comment and peer review, which is a four to eight-month process (see 15 U.S.C. 2605(b)(4)(H); 40 CFR 702.45; 40 CFR 702.49).

Moreover, even if the regulations were amended and, in response to the finalized amendments, chemical manufacturers could reasonably ascertain and provide the newly-required information, EPA would be receiving information on manufacturing, import, and processing for conditions of use that may no longer be ongoing conditions of use.. As an example, in comparing the 2012 and 2016 United States Geological Survey Minerals Yearbook for asbestos (Refs. 7 and 5), EPA has observed that a number of importers of raw asbestos and asbestos-containing articles are exiting or have already exited the market. As a result, all or a significant part of the information they would report for activities undertaken during the 2016 CDR submission period (i.e. 2012-2015) would likely consist of conditions of use that are no longer ongoing, and, thus, uninformative for the risk evaluation.

In sum, EPA believes – based on the extensive research and data gathering already conducted during the asbestos risk evaluation process – that the requested amendments to the CDR rule would not lead to the reporting of new information that would contribute to EPA's

ongoing asbestos risk evaluation or, if needed, subsequent risk management decision(s). Based on outreach and research, EPA believes that the Agency already has the information that would be collected, without amending the CDR rule. Furthermore, and, as previously discussed, EPA would not be able to promulgate a rulemaking to require the reporting by the submission period (beginning January 1, 2019) the petitioners requested, nor would the rulemaking amendments discussed above allow EPA to receive any new information in time to inform the ongoing asbestos risk evaluation.

EPA finds that petitioners have failed to set forth sufficient facts to establish that it is necessary to issue the requested amendment to require immediate past reporting of the manufacturing and use of asbestos under the CDR rule for the 2016 reporting cycle.

ii. Lift exemption for naturally occurring chemical substances for asbestos. a. Petitioners' request. Several times in the petition, the petitioners requested that EPA either add asbestos to the CDR rule or close what they referred to as a "reporting loophole" for asbestos under the CDR rule. Under the exemption for naturally occurring chemical substances at 40 CFR 711.6(a)(3), manufacturers (including importers) do not have to report a chemical substance when the substance is manufactured as described at 40 CFR 710.4(b).

As support for the petitioners' claim of a reporting loophole for asbestos, the petitioners cited EPA's letter to Occidental Chemical Corporation (Occidental), dated July 28, 2017, wherein EPA stated that it did not believe Occidental was required to report its imports of asbestos under the CDR rule because Occidental's operations satisfied the criteria of the naturally occurring chemical substances exemption (Ref. 1). EPA issued this letter in response to the Asbestos Disease Awareness Organization's notice of intent to sue Occidental for what the Organization believed to be a CDR violation. In reaction to EPA's letter to Occidental, the

petitioners stated that "EPA's interpretation of the CDR rule means that no manufacturers or importers of asbestos or asbestos-containing products were required to report on their activities" (Ref. 1). The petitioners further posited that "this loophole in the rule has resulted in a troubling – and wholly avoidable – lack of reliable information about who is importing asbestos and in what quantities, where and how asbestos is being used in the U.S., and who is being exposed and how that exposure is occurring" (Ref. 1).

b. Agency response. EPA emphasizes that manufacturers and importers of asbestos are *already* required to report asbestos under the CDR rule if they meet the production volume threshold of 2,500 pounds and do not qualify for an exemption (including the naturally occurring substances exemption). As noted above, during the last reporting cycle, two companies reported under the CDR rule the import of asbestos for use in the chloro-alkali industry to make asbestos diaphragms. After extensive research and outreach, including with Customs and Border Protection, EPA believes that the chloroalkali industry is the only importer of raw bulk asbestos, and the Agency has sufficient volume, import, use, and hazard data from the industry to conduct the risk evaluation.

Petitioners mistakenly seem to believe that *no* domestically manufactured or imported asbestos is currently required to be reported under the CDR rule as a result of the exemption for naturally occurring substances. EPA's letter to Occidental, however, found that the exemption for naturally occurring substances applied under the specific circumstances described in the letter. EPA did not find that the exemption applied for all "manufacturers or importers of asbestos or asbestos-containing products" as claimed by petitioners.

In general, the petitioners, misunderstand the naturally occurring substances exemption's specific definition. As defined by 40 CFR 711.6(a)(3), a naturally occurring chemical substance

is:

> Any naturally occurring chemical substance, as described in 40 CFR 710.4(b). The applicability of this exclusion is determined in each case by the specific activities of the person who manufactures the chemical substance in question. Some chemical substances can be manufactured both as described in 40 CFR 710.4(b) and by means other than those described in 40 CFR 710.4(b). If a person described in § 711.8 manufactures a chemical substance by means other than those described in 40 CFR 710.4(b), the person must report regardless of whether the chemical substance also could have been produced as described in 40 CFR 710.4(b). Any chemical substance that is produced from such a naturally occurring chemical substance described in 40 CFR 710.4(b) is reportable unless otherwise excluded.

A chemical substance qualifies as naturally occurring only if it is: (1)(i) unprocessed or (ii) processed only by manual, mechanical, or gravitational means; by dissolution in water; by flotation; or by heating solely to remove water; or (2) extracted from air by any means (40 CFR 710.4(b)). Mined materials such as metal ores, minerals, and clays that are separated from the natural environment by only physical means are examples of chemical substances that are considered naturally occurring for TSCA purposes and are exempt from reporting under the CDR rule. If this specifically defined exemption does not apply (and if no other exemption applies), then a manufacturer or importer of asbestos must report under the CDR rule.
In addition, given that the purpose of domestic manufacturing or importing of raw asbestos is to make asbestos diaphragms, for which EPA already has use and exposure information, removing the exemption for reporting on naturally occurring substances for asbestos would not provide any additional data to EPA. EPA already has this information obtained through extensive outreach and research (as described in Unit IV.A.i.).

EPA finds that petitioners have failed to set forth sufficient facts to establish that it is necessary to issue the requested amendment to lift the naturally occurring chemical substances exemption for asbestos under the CDR rule.

iii. Require reporting of imported articles containing asbestos. a. Petitioners' request. As noted by the petitioners, 40 CFR 711.10(b) exempts from reporting persons who import a reportable substance as part of an article. Additionally, the petitioners asserted that "since a large number of the asbestos-containing products historically in use are articles, this exemption would prevent EPA from obtaining a considerable amount of useful information about asbestos use and exposure in the U.S." As such, the petitioners requested that EPA make the articles exemption at 40 CFR 711.10 inapplicable to asbestos. Furthermore, they requested that reporting be required for "all imported articles in which asbestos is present at detectable levels" (Ref. 1).

b. Agency response. Import of a chemical substance as part of an article is not subject to reporting under the CDR rule (40 CFR 711.10(b)). A chemical substance is considered to be imported "as part of an article" if the substance is not intended to be removed from that article and has no end use or commercial purpose separate from the article of which it is a part (Ref. 8).

While the petitioners correctly pointed out that "a large number of the asbestos-containing products historically in use [were] articles" (Ref. 1), these uses, along with most uses of asbestos, have ceased and thus are not being evaluated as part of the ongoing asbestos risk evaluation (Ref. 3). As identified in the Problem Formulation of the Risk Evaluation for Asbestos, currently imported articles include asbestos-containing sheet gaskets, other gaskets and packing, aftermarket automotive brakes/linings, other vehicle friction products, brake blocks, asbestos cement products, and woven products. EPA has relied on extensive outreach and research, including sources other than the CDR rule, to determine the conditions of use of asbestos, as described in Unit IV.A.i. The Agency does not believe amending the CDR rule would be helpful in collecting additional import information on articles. EPA has sufficient information on imported articles containing asbestos to conduct the risk evaluation and inform

subsequent risk management decisions based the risk determination.

Though the petitioners suggested that there may be import of additional articles containing asbestos that EPA is unaware of, they provide no examples of any such known or ongoing imports of asbestos articles and provide no reason to believe that there may be any of which EPA is unaware. Considering the extensive outreach and research that has been conducted since December 2016, EPA has no reason to believe there are ongoing imports of articles containing asbestos that are unknown to EPA.

While the petitioners requested that EPA require reporting for "all imported articles in which asbestos is present at detectable levels" (Ref. 1), the information that manufacturers are required to report under the CDR rule is limited to information "known to or reasonably ascertainable" by the reporter (40 CFR 704.3). EPA could not require manufacturers to test these products for the purposes of CDR reporting under TSCA section 8. Therefore, EPA would not be able to require CDR reporters to report articles in which the potential presence of asbestos could be determined only through testing.

Additionally, because information reported under the CDR rule is limited to that which is "known to or reasonably ascertainable" by the reporter, even if EPA were to require the reporting of asbestos-containing articles under the CDR rule, importers would rely on information readily available to them, such as Safety Data Sheets or other documentation provided by their foreign supplier. EPA does not believe that making the requested amendment to the CDR rule would result in importers reporting articles that are not already known to EPA because the Agency has conducted its own research to analyze Safety Data Sheets and other evidence in order to determine the conditions of use of asbestos for the risk evaluation. EPA believes that lifting the articles exemption for the reporting of asbestos under the CDR rule would not provide any new

use information that would inform the ongoing risk evaluation or any subsequent risk management decisions, if needed.

For these reasons, EPA believes that the petitioners have failed to set forth sufficient facts to establish that it is necessary to issue the requested amendment to lift the articles exemption for asbestos under the CDR rule.

iv. Lift the byproduct and impurity exemption for asbestos. a. Petitioners' request. The petitioners cited 40 CFR 711.10(c), which exempts from CDR reporting activities described in 40 CFR 720.30(g) and (h). Under this exemption, manufacturers (including importers) do not have to report a chemical substance when the substance is an impurity or a byproduct not used for commercial purposes. The petitioners requested that these exemptions be made inapplicable to asbestos, "since the low levels of asbestos that have been found in makeup and crayons may be unintended contaminants that comprise byproducts and impurities" (Ref. 1). Moreover, the petitioners stated that, "EPA needs information about asbestos-contaminated consumer products to conduct a complete and protective risk evaluation" (Ref. 1)

b. Agency response. Under 40 CFR 720.30(g), a byproduct is exempt from reporting if: "...its only commercial purpose is for use by public or private organizations that (1) burn it as a fuel, (2) dispose of it as a waste, including in a landfill or for enriching soil, or (3) extract component chemical substances from it for commercial purposes." Under 40 CFR 720.30(h), any (1) impurity or (2) any byproduct that is not used for a commercial purpose is not subject to reporting. Based on the extensive outreach and research undertaken by EPA in connection with developing the ongoing asbestos risk evaluation, EPA is unaware of any examples of asbestos as a byproduct. Thus, EPA anticipates there would be no new information reported if the Agency were to lift the byproduct exemption for asbestos.

With regard to the impurity exemption, the petitioners requested that these exemptions be made inapplicable to asbestos "since the low levels of asbestos that have been found in makeup and crayons *may be* unintended contaminants that comprise byproducts and impurities" (emphasis added). However, these findings were made only after independent laboratory testing of final consumer products, and petitioners make no attempt to explain why they believe these findings are the result of the *manufacture* of asbestos as a byproduct or impurity such that it would be reportable under the CDR rule if the Agency required such reporting. Indeed, the CDR rule does not require submitters to perform chemical analyses of products containing the chemicals they manufacture. Instead, the information required when reporting on a chemical is limited to information that is "known to or reasonably ascertainable" by the manufacturer. This standard is applicable to all information reported in accordance with 40 CFR 711.15(b) as required by TSCA section 8(a)(2). Thus, it is unlikely that EPA would receive new information that would change its understanding of the conditions of use for asbestos that can be addressed under TSCA.

EPA does not believe that making the requested amendment to the CDR rule would result in reporting of asbestos as an impurity or a byproduct, for uses that are known or reasonably ascertainable, and the petitioners have not provided evidence that there are such known uses that are ongoing but remain outside the scope of the asbestos risk evaluation. EPA finds that the petitioners have failed to set forth sufficient facts to establish that it is necessary to issue the requested amendment to lift the byproducts and impurities exemptions for asbestos under the CDR rule.

v. Lower asbestos reporting threshold to 10 pounds. a. Petitioners' request. Manufacturers (including importers) are required to report under the CDR rule if they meet

certain production volume thresholds, generally 25,000 pounds or more of a chemical substance at any single site. However, a reduced reporting threshold of 2,500 pounds applies to chemical substances subject to certain TSCA actions (40 CFR 711.8). The petitioners correctly point out that because asbestos is subject to a TSCA section 6 action (40 CFR 763, Subpart I), it is subject to the lower reporting threshold of 2,500 pounds. The petitioners believe that even the reduced reporting threshold "is too high in view of the absence of any safe level of exposure to asbestos and the need for comprehensive use and exposure information for the ongoing risk evaluation" (Ref. 1). The petitioners therefore request that the reporting threshold for asbestos be lowered to 10 pounds for any year in the CDR reporting period.

b. Agency response. Since asbestos is no longer mined in the United States and the only importation of raw asbestos is for production of asbestos diaphragms, for which yearly imports for each site well exceed the threshold of 2,500 pounds, lowering the reporting threshold would not provide additional information to EPA. As a result, EPA believes that it already sufficient import data from the chloralkali industry to support conducting the risk evaluation.

While the petitioners believe that the current reporting threshold "is too high in view of the absence of any safe level of exposure to asbestos and the need for comprehensive use and exposure information for the ongoing risk evaluation," they fail to show that lowering the reporting threshold would provide any new information to EPA. Therefore, EPA finds that the petitioners have failed to set sufficient facts to establish that it is necessary to issue the requested amendment to lower the CDR reporting threshold for asbestos.

vi. Add processors of asbestos to CDR. a. Petitioners' request. The petitioners pointed out that, while EPA has the authority to require that processors report under the CDR rule, processors are not currently subject to CDR reporting requirements. The petitioners requested

that EPA amend the CDR rule to require reporting from asbestos processors asserting that, while manufacturers (including importers) of a chemical substance are required to report downstream processing and use information under the CDR rule, "in many cases, importers will be unable to provide the detailed information about use and exposure necessary for full understanding of the risks posed by these products. Therefore, the additional information available to processors will be essential" (Ref. 1).

b. Agency response. Currently, the CDR rule does not require processors of any chemical substances to report. However, EPA knows of only two ongoing uses of asbestos that constitute processing: (1) the processing of raw asbestos into diaphragms and (2) the fabrication of gaskets from imported asbestos-containing sheet gaskets. Information on these uses is well understood by EPA as a result of direct communication with these processors (see Problem Formulation for asbestos (Ref. 3)). Accordingly, EPA does not believe that requiring processors of asbestos under the CDR rule will provide useful information not already in the Agency's possession. The petitioners have failed to indicate what additional information EPA would collect by requiring asbestos processors to report under the CDR rule. Therefore, EPA finds that the petitioners have failed to set forth sufficient facts to establish that it is necessary to issue the requested amendment to require processors of asbestos to report under the CDR rule.

vii. Lift CBI claims for all reports to CDR for asbestos. a. Petitioners' request. In addition to the requests made under TSCA section 8, the petitioners requested that EPA use its authority under TSCA sections 14(d)(3) and 14(d)(7) to lift CBI claims on asbestos information reported under the CDR rule.

TSCA section 14(d)(3) states that CBI "shall be disclosed if the Administrator determines that disclosure is necessary to protect health or the environment against an unreasonable risk of

injury to health or the environment, without consideration of costs or other nonrisk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant by the Administrator under the conditions of use" (15 U.S.C. 2613(d)(3)). The petitioners requested that EPA use its authority under TSCA section 14(d)(3) to lift CBI claims on information reported under the CDR rule, "given the significant risk of harm that asbestos presents at any level of exposure, knowledge of how, where and in what quantities asbestos and asbestos-containing products are being imported and used is clearly necessary to protect against unreasonable risks and EPA would have an ample basis to make a determination to that effect" (Ref. 1).

TSCA section 14(d)(7) states that CBI "may be disclosed if the Administrator determines that disclosure is relevant in a proceeding under this Act, subject to the condition that the disclosure is made in such a manner as to preserve confidentiality to the extent practicable without impairing the proceeding" (15 U.S.C. 2613(d)(7)). For EPA's authority under TSCA section 14(d)(7), the petitioners posited that "the ongoing asbestos risk evaluation is such a 'proceeding' and information on asbestos importation and use is clearly 'relevant' because it has a direct bearing on EPA's determinations of exposure and risk and the ability of the public to comment on these elements of the risk evaluation" (Ref. 1).

b. Agency response. Petitioners' request is not appropriate for a TSCA section 21 petition. Under TSCA section 21 (15 U.S.C. 2620(a)), any person can petition EPA to initiate a rulemaking proceeding for the issuance, amendment, or repeal of a rule under TSCA sections 4, 6, or 8, or an order under TSCA sections 4 or 5(e) or (f). Under this express statutory language, therefore, a TSCA section 21 petition is not a vehicle to petition EPA to initiate an action under TSCA section 14.

Moreover, even if petitioners could use the TSCA section 21 mechanism to request an action under TSCA section 14, the petitioners have not made a sufficient case for lifting CBI protections as described by either TSCA section 14(d)(3) or section 14(d)(7). TSCA section 14(d)(3) states that CBI "shall be disclosed if the Administrator determines that disclosure is necessary to protect health or the environment against an unreasonable risk of injury to health or the environment...." The asbestos risk evaluation is ongoing for the uses reported under the CDR rule, and EPA has yet to determine if these uses pose an unreasonable risk. In the absence of an unreasonable risk finding for a condition of use, EPA cannot make a determination whether disclosure is necessary under TSCA section 14(d)(3). TSCA section 14(d)(7) states that CBI "may be disclosed if the Administrator determines that disclosure is relevant in a proceeding under this Act, subject to the condition that the disclosure is made in such a manner as to preserve confidentiality to the extent practicable without impairing the proceeding." However, EPA believes that disclosure of CBI would have no practical relevance to the risk evaluation or risk determination as the CBI claims are limited and EPA retains the ability to characterize the information without revealing the actual protected data. Accordingly, EPA denies this request.

V. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

1. Asbestos Disease Awareness Organization, American Public Health Association,

Center for Environmental Health, Environmental Working Group, Environmental Health Strategy Center, and Safer Chemicals Healthy Families to Andrew Wheeler, Acting Administrator, Environmental Protection Agency. Re: Petition under TSCA Section 21 to Require Reporting on Asbestos Manufacture, Importation and Use under TSCA Section 8(a). Received September 27, 2018.

2. Bob Sussman email to Jeff Morris, Director of EPA's Office of Pollution Prevention and Toxics. RE: TSCA Section 21 Petition. Received November 29, 2018.

3. EPA. Problem Formulation of the Risk Evaluation for Asbestos. May 2018. Washington, DC: US Environmental Protection Agency, Office of Pollution Prevention and Toxics. *https://www.epa.gov/sites/production/files/2018-06/documents/asbestos_problem_formulation_05-31-18.pdf.*

4. EPA. Public database 2016 chemical data reporting (May 2017 release). Washington, DC: US Environmental Protection Agency, Office of Pollution Prevention and Toxics. Retrieved from *https://www.epa.gov/chemical-data-reporting.*

5. Flanagan, DM. (2016). 2015 Minerals yearbook. Asbestos [advance release]. In US Geological Survey 2015 Minerals Yearbook. Reston, VA: U.S. Geological Survey. *https://minerals.usgs.gov/minerals/pubs/commodity/asbestos/myb1-2015-asbes.pdf.*

6. EPA. Response to Petition to Require Reporting on Asbestos Manufacture, Importation and Use under TSCA Section 8(a). Letter. 2018.

7. Virta, Robert. (2012). 2012 Minerals yearbook. Asbestos. In US Geological Survey 2015 Minerals Yearbook. Reston, VA: U.S. Geological Survey. *https://minerals.usgs.gov/minerals/pubs/commodity/asbestos/myb1-2012-asbes.pdf.*

8. EPA. TSCA Chemical Data Reporting. Fact Sheet: Articles. August 3, 2012.

https://www.epa.gov/sites/production/files/documents/articlesfactsheetforcdr_reporting_080312.pdf.

List of Subjects in 40 CFR Chapter I

Environmental protection, Asbestos, Flame retardants, Chemicals, Confidential business information, Hazardous substances, Reporting and recordkeeping requirements.

Dated: 12.21.18

Nancy B. Beck, Ph.D.

Principal Deputy Assistant Administrator, Office of Chemical Safety and Pollution Prevention.

OCSPP TSCA IMPLEMENTATION POINTS

June 1st Actions Released:

- **Problem Formulations.** The problem formulation documents refine the scope of risk evaluations for the first ten chemicals selected under the amended Toxic Substances Control Act (TSCA). This is an important interim step prior to completing and publishing the final risk evaluations by December 2019. They clarify the chemical uses that EPA expects to evaluate and describe how EPA expects to conduct the evaluations. EPA is accepting comments until **July 26, 2018**.
- EPA will now focus efforts on robust hazard and exposure assessments that will be consistent with the scientific requirements in the statute and the risk evaluation framework rule. We plan to finalize the risk evaluations by late 2019.
- **Systematic Review.** EPA's systematic review approach document will guide EPA's selection and review of studies and provide transparency for the evaluation scientific information. EPA is accepting comments until **July 26, 2018.**
- **Asbestos SNUR**. EPA is proposing a SNUR for certain uses of asbestos (including asbestos-containing goods) that would require manufacturers/importers to receive approval before starting/resuming asbestos manufacturing, importing or processing. This review process would provide EPA with the opportunity to evaluate the intended use and, when necessary, prohibit or limit the use. EPA is accepting comments until **August 10, 2018.**

June 22nd Actions Released: On the two-year anniversary of the amendments to TSCA, EPA met its statutory responsibilities to release the following guidance and policy, and announced a lead action:

- **Dust-Lead Hazard Standards.** EPA proposed new standards for lead in dust for floors and window sills and proposed to maintain the definition of lead-based paint. The standards are more protective and reflect the best available science on the human health effects of lead. Comments are being accepted until **August 16, 2018**.
- **Finalized strategy to reduce animal testing.** The strategy promotes the development and implementation of alternative test methods and strategies to reduce, refine, or replace vertebrate animal testing.
- **Final rule on reporting mercury manufacturing and imports.** The information to be collected will be used to develop future inventories of mercury and mercury-containing product supply, use, and trade in the United States.
- **Guidance for state, tribal, and local governments, and medical personnel and emergency responders on sharing confidential business information (CBI).** These guidances specify the process that will enable other governmental entities and medical and emergency personnel to request CBI.
- **Policy and procedures for assigning unique identifiers to better publicly track information on chemicals while protecting CBI.** An identifier will be applied to a substance, whose identity is protected as CBI, and to related information allowing the public to connect information related to the same substance.
- **Guidance on structurally descriptive generic names.** This guidance will allow EPA to share more information with the public about the structure of substances while protecting the confidential elements of the substance's specific chemical identity. EPA is accepting comments until **August 10, 2018.**

OCSPP PESTICIDE TALKING POINTS

Worker Protection Standard (WPS) and Certification of Pesticide Applicators (CPA) Rules

- In response to stakeholder concerns, in December 2017, EPA released a Federal Register Notice to initiate the process to revise certain requirements in the WPS and CPA rules including minimum age, designated representatives, and application exclusion zones, and the minimum age requirement for certified applicators.
- On June 15, 2018, EPA sent proposed revisions to the WPS and CPA rules to OMB for review. Following OMB review, EPA will send the proposed revisions to the appropriate congressional committees and USDA for review. These reviews are part of the normal FIFRA rulemaking process.
- By the end of FY 2018, EPA expects to publish a Notice of Proposed Rulemaking to solicit public input on proposed revisions to the WPS and CPA rules.

PRIA

- The expiration date of PRIA 3 is specified in the law as September 30, 2017, but was extended through September 30, 2018, by the FY 18 Omnibus Appropriations Budget.
- On June 28, 2018, the Senate passed a 5-year extension of PRIA that limits changes EPA can make to the pesticides worker protection rules for three years. The amended bill now goes back to the House to be reconciled with the original bill passed on March 20, 2017.
- EPA strongly supports PRIA 4. PRIA 4 is supported by a coalition of divergent interests and it facilitates market access of pesticides, benefitting both the pesticide and agricultural industries.

Chlorpyrifos

- In March 2017, EPA denied a petition requesting that EPA revoke all tolerances and cancel all chlorpyrifos registrations. EPA will continue to review the science addressing neurodevelopmental effects of chlorpyrifos through the registration review of chlorpyrifos, which must be completed by October 1, 2022. USDA supported this decision.
- The Agency concluded that despite several years of study and external peer review by experts on EPA's FIFRA Scientific Advisory Panel, the science addressing potential neurodevelopmental effects of chlorpyrifos requires further evaluation.
- The petition denial initiated the objections phase of the petition process provided under the Federal Food, Drug, and Cosmetic Act (FFDCA). FFDCA requires the EPA to respond to the objections "as soon as practicable".
- Petitioners have brought new litigation in the 9th Circuit (*LULAC v. Pruitt*) directly challenging the March 2017 denial order. As stated in oral arguments on July 9, 2018, EPA intends to respond to the objections within a year, a timeframe that is consistent with precedent.

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- Petitioners have brought new litigation in the 9th Circuit (*LULAC v. Pruitt*) directly challenging the March 2017 denial order. As stated in oral arguments on July 9, 2018, EPA intends to respond to the objections within a year, a timeframe that is consistent with precedent.
- The Agency has concluded that despite several years of study and external peer review by experts on EPA's FIFRA Scientific Advisory Panel, the science addressing potential neurodevelopmental effects of chlorpyrifos requires further evaluation. As part of registration review (required to completed by 2022), EPA will continue to review the science addressing neurodevelopmental effects of chlorpyrifos. Once completed, a Human Health Risk Assessment will be published for a 60-day public comment period.
- Chlorpyrifos is an organophosphate (OP) pesticide, therefore, consistent with the FFDCA, the agency must also update the organophosphate cumulative assessment completed in 2006.

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 12/21/2018 3:03:19 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Reed, Kristen [Reed.Kristen@epa.gov]
Subject: FW: Section 21 petition - revised w/Nancy and Erik's edits
Attachments: 18T-0312_FRL-9988-56_FRDocument_2018-12-18 V3 nancy erik edits.docx

Importance: High

Attached is a clean version only showing how Nancy's and Erik's comments have been addressed. Nancy and Erik you may want to review to make sure this is as expected while Charlotte reviews. Kris please print 1 color copy for Charlotte asap. Thanks!

From: Wolf, Joel
Sent: Friday, December 21, 2018 10:01 AM
To: Hanley, Mary <Hanley.Mary@epa.gov>
Cc: Kramek, Niva <kramek.niva@epa.gov>; Vendinello, Lynn <Vendinello.Lynn@epa.gov>; Canavan, Sheila <Canavan.Sheila@epa.gov>; Wormell, Lance <Wormell.Lance@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Henry, Tala <Henry.Tala@epa.gov>; Mottley, Tanya <Mottley.Tanya@epa.gov>; Blunck, Christopher <Blunck.Chris@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>; Morris, Jeff <Morris.Jeff@epa.gov>; Hartman, Mark <Hartman.Mark@epa.gov>
Subject: Section 21 petition - revised w/Nancy and Erik's edits

Hi Mary,

Attached is a revised version of the petition that captures the edits we received from Nancy and Erik yesterday evening. The attached document is not a cumulative redline. It only reflects those changes from yesterday.

Thanks, joel

Joel Wolf
Chief, Existing Chemicals Branch
OCSPP/OPPT/CCD
US Environmental Protection Agency
WJC East, Room 4121A
202.564.0432, wolf.joel@epa.gov

Message

From: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Sent: 8/21/2018 6:01:22 PM
To: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
CC: Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: RE: Snopes asbestos correction.2.docx
Attachments: Snopes asbestos correction clean.docx

Flag: Flag for follow up

Nancy – see page 4 for the additional comments we discussed this morning. Let me know if you need anything else on this. Thanks.

From: Dunton, Cheryl
Sent: Monday, August 20, 2018 7:20 AM
To: Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>
Cc: Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>
Subject: RE: Snopes asbestos correction.2.docx

Here this is cleaned up to incorporate Nancy's and Charlotte's comments. Let me know if you have further edits/comments on this. If not, I'll work with OPA to get the corrections to Snopes. Thanks.

From: Bertrand, Charlotte
Sent: Friday, August 17, 2018 4:54 PM
To: Dunton, Cheryl <Dunton.Cheryl@epa.gov>
Cc: Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>
Subject: Snopes asbestos correction.2.docx

Hi – I've added a few extra comments to Nancy's. Thanks!

Message

From: Keller, Kaitlin [keller.kaitlin@epa.gov]
Sent: 6/22/2018 6:19:46 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]
Subject: revised slides
Attachments: June BNA Webinar - TSCA Slides 6.22.2018.pptx

Kaitlin Keller, Special Assistant
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
(202) 564-7098

BY ELECTRONIC MAIL AND FEDERAL EXPRESS

September 25, 2018

Andrew Wheeler
Acting Administrator
U.S. Environmental Protection Agency
Mail code: 1101A
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: *Petition under TSCA Section 21 to Require Reporting on Asbestos Manufacture, Importation and Use under TSCA Section 8(a)*

Dear Acting Administrator Wheeler:

This petition under section 21 of the Toxic Substances Control Act (TSCA), 15 U.S.C. §2620, is submitted by the Asbestos Disease Awareness Organization (ADAO), American Public Health Association (APHA), Center for Environmental Health (CEH), Environmental Working Group (EWG), Environmental Health Strategy Center (EHSC), and Safer Chemicals Healthy Families (SCHF). Petitioners are nonprofit public health and environmental organizations committed to addressing the unreasonable risk of injury that asbestos continues to pose to the US population. We support a robust and comprehensive risk evaluation on asbestos under section 6(b) of amended TSCA, followed by rulemaking to ban asbestos under section 6(a) of the law.

As authorized by section 21(a) of TSCA, our petition seeks initiation of a rulemaking under section 8(a) of TSCA, 15 U.S.C. §2607, to amend the TSCA Chemical Data Reporting (CDR) rule, 40 C.F.R. Part 711. The CDR amendments we seek would accomplish three purposes:

(1) add asbestos to the CDR rule, thereby requiring reporting on importation and use of asbestos and asbestos-containing products in the US,

(2) lower the reporting threshold, eliminate exemptions for impurities and articles, and require reporting by processors in order to assure that EPA has the information on asbestos necessary to meet its TSCA responsibilities, and

(3) determine that reports submitted on asbestos are not subject to protection as confidential business information (CBI) because disclosure is necessary to protect against an unreasonable risk of injury to health under section 14(d)(3) of TSCA.

BASIS FOR GRANTING THE PETITION

Asbestos is among the most dangerous chemicals ever produced, with expert bodies agreeing that there is no safe level of exposure. Recent research indicates that nearly 40,000 asbestos-

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related deaths occur in the US each year.[1] In 1989, EPA determined that nearly all uses of asbestos presented an "unreasonable risk of injury" under section 6 of TSCA.[2] The basis for this conclusion is even more compelling today.

In December of 2016, EPA selected asbestos as one of the initial 10 chemicals to undergo risk evaluations under amended TSCA.[3] Then, in June of this year, EPA issued a Problem Formulation document which outlines how EPA plans to conduct that evaluation.[4]

The Problem Formulation attempts to identify the asbestos uses that EPA will address in its risk evaluation but its description of these uses is limited, vague and incomplete and the Agency acknowledges that "the import volume of products containing asbestos is not known." Without adequate information on ongoing importation and use of asbestos and asbestos-containing products, the risk evaluation will fail to provide a meaningful picture of the threat that asbestos poses to public health and citizens will be in the dark about exposure to asbestos in their communities and places of employment.

The CDR rule is EPA's primary tool under TSCA for obtaining basic information on the manufacture, importation and use of chemicals and the nature and extent of exposure to these substances. However, as EPA advised a major asbestos importer and user (Occidental Chemical) on July 28, 2017, asbestos is exempt from CDR reporting because it is a "naturally occurring substance."[5] This loophole in the rule has resulted in a troubling – and wholly avoidable – lack of reliable information about who is importing asbestos and in what quantities, where and how asbestos is being used in the US, and who is being exposed and how that exposure is occurring. As a consequence, the public is not adequately informed about the risks that asbestos presents to health in the US, and EPA itself lacks the basic information required for a complete and informed risk evaluation that assures that unsafe asbestos uses are removed from commerce.

This petition asks EPA to close the CDR reporting loophole for asbestos by expeditiously amending the CDR rule so asbestos is subject to reporting and to frame these reporting requirements broadly to assure that they capture all imports and domestic uses of asbestos and asbestos-containing products. Petitioners further request that the amended CDR rule require immediate submission of reports on asbestos for the 2016 reporting cycle. This will maximize EPA's ability to use the information reported to conduct the ongoing asbestos risk evaluation and the subsequent risk management rulemaking under TSCA section 6(a). Finally, petitioners request that EPA determine under TSCA section 14(d)(3) that the CDR reports on asbestos will

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[1] S. Furuya, O. Chimed-Ochir, K. Takahashi, A. David, and J. Takala, "Global Asbestos Disaster," International Journal of Environmental Research and Public Health, vol. 15, no. 5, p. 15, 2018.

[2] Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions (54 Federal Register 29460, July 12, 1989) (FRL–3476–2),

[3] 81 Federal Register 91927 (December 19, 2016).

[4] 83 Federal Register 26998 (June 11, 2018).

[5] A copy of this letter from Jeffrey Morris, Director of OPPT, to Rebecca Rentz, Esq. of Occidental Petroleum is attached to this petition.

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not be withheld as CBI because their disclosure is necessary to protect against an unreasonable risk of injury. This will ensure that the public is fully informed about the presence of asbestos in their communities and the dangers of unsafe asbestos exposure.

EPA's failure to require TSCA reporting on asbestos to inform its ongoing risk evaluation is a marked departure from previous EPA initiatives to address the risks of asbestos. To support its comprehensive rulemaking to ban most uses of asbestos in the 1989, EPA used its TSCA section 8(a) reporting authority in 1982 to collect information on industrial and commercial uses of asbestos.[6] Congress then enacted, and President Reagan signed, the Asbestos Information Act of 1988 imposing a one-time requirement for current and former manufacturers and processors to report asbestos-containing products to EPA.[7] EPA collected extensive information under the law, which it released to the public on February 13, 1990.[8] By not utilizing these mandatory information collection tools, EPA has been severely handicapped in its ability to identify and assess all pathways of asbestos exposure that may be endangering public health. As a result, its risk evaluation will be weak, incomplete and unprotective.

By granting this petition, EPA will obtain, and be able to release to the public, the same level of information on asbestos use on which it based previous regulatory efforts to protect against asbestos risks and will have an informed basis for its ongoing asbestos risk evaluation.

DESCRIPTION OF PETITIONERS

Founded in 2004, Asbestos Disease Awareness Organization (ADAO), an independent 504(c)(3) non-profit organization, has spent over a decade working to prevent asbestos-caused diseases. ADAO works nationally and internationally with the leading scientists, medical doctors, industrial hygiene specialists, legislators and community advocates to protect public health and our environment. As a leader in education, ADAO hosts an annual international academic conference, now in its 14th year, to promote scientific advances in the treatment and cure of asbestos disease and advocate for the elimination of all asbestos exposures throughout the world.

The American Public Health Association (APHA) champions the health of all people and all communities, strengthens the profession of public health, shares the latest research and information, promotes best practices, and advocates for public health policies grounded in research. APHA represents over 20,000 individual members and is the only organization that combines a nearly 150-year perspective and a broad-based member community with an interest in improving the public's health. APHA has long advocated for policies to protect the public from exposure to harmful chemicals and other hazardous substances, including asbestos.

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[6] 47 Federal Register 33207 (July 30, 1982) (40 CFR 763.60).

[7] Pub. L. 100-577. To implement the law, EPA published a notice on April 18, 1989 (54 FR 15622) establishing a process and schedule for reporting information required by the Act. In a subsequent notice, the Agency informed submitters that it would not accept CBI claims. 54 Federal Register 38736 (Sept, 20. 1989).

[8] 55 Federal Register 5144.

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The Center for Environmental Health (CEH) is an American non-profit organization organization working to protect children and families from harmful chemicals in air, food, water and in everyday products. Its vision and mission are a world where everyone lives, works, learns and plays in a healthy environment; we protect people from toxic chemicals by working with communities, businesses, and the government to demand and support business practices that are safe for human health and the environment. CEH is headquartered in Oakland, California in the United States, with an East Coast office in New York City.

For 16 years, the Environmental Health Strategy Center (EHSC) has worked to ensure that all families are healthy and thriving in a fair and healthy economy. We work for safe food and water, toxic-free products, and good green jobs. We run effective issue campaigns and advocate science-based solutions that advance a bold vision with pragmatism. A coalition builder, the Center develops grassroots leaders and champions for environmental public health and sustainable economic development. We work in Maine and nationally.

The Environmental Working Group (EWG) is a non-profit, non-partisan organization that works to empower people to live healthier lives in a healthier environment. EWG does this by creating and sharing research reports and consumer guides that help people educate themselves about the products they use. EWG also engages with policy-makers at the state and federal levels to advocate for the strengthening and enforcement of laws related to environmental health. EWG has been deeply involved in efforts to reform TSCA over the last decade and has been actively involved in implementation of the Frank Lautenberg Chemical Safety for the Twenty First Century, including the rules and actions related to asbestos.

Safer Chemicals, Healthy Families (SCHF) fights for strong chemical policy, works with retailers to phase out hazardous chemicals and transform the marketplace, and educates the public about ways to protect our families from toxic chemicals. SCHF leads a coalition of 450 organizations and businesses united by our common concern about toxic chemicals in our homes, places of work, and products we use every day.

DANGERS OF ASBESTOS EXPOSURE

The International Agency for Research on Cancer (IARC),[9] the National Toxicology Program (NTP),[10] the Occupational Safety and Health Administration (OSHA),[11] the National Institute for

[9] "IARC Monographs—Arsenic, Metals, Fibres, and Dusts, Volume 100 C. A Reviews of Human Carcinogens," in "IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. International Agency for Research on Cancer, World Health Organization.," International Agency for Research on Cancer2012, Available: http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C.pdf.
[10] National Toxicology Program (NTP). Asbestos. Report on Carcinogens, Fourteenth Edition. US DHHS, 2016.
[11] Occupational Safety and Health Administration (OSHA). Occupational exposure to asbestos. Final rule. 29 CFR Parts 1910, et al. Federal Register, August 10, 1994.

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Occupational Safety and Health (NIOSH),[12] the World Health Organization (WHO)[13] and a number of other regulatory and public health bodies recognized asbestos as a human carcinogen decades ago. In its most recent monograph on asbestos published in 2012, IARC found the following cancers in humans to be causally related to asbestos exposure: lung cancer, malignant mesothelioma, ovarian cancer, and cancer of the larynx.[14] There is considerable evidence in the scientific literature of causal associations with gastro-intestinal cancers and kidney cancer. Non-malignant diseases are also caused by asbestos. These include asbestosis and asbestos-related pleural thickening.[15] All fiber types in commercial use have been linked causally with each of these diseases and are regulated accordingly by OSHA and other government agencies.

Despite the voluntary elimination of many asbestos products, the death toll from asbestos exposure remains alarmingly high and is increasing. At the 14th Annual Asbestos Disease Awareness Conference in Washington D.C. this year, Dr. Jukka Takala DSc, MSc, BSC, President of the International Commission of Occupational Health (ICOH), reported a shocking increase in previous estimates of asbestos-related deaths, underscoring the escalating and critical need for action by EPA. According to Dr. Takala's recently published research, asbestos-related diseases cause 39,275 deaths in the United States annually - more than double the previous estimates of 15,000 per year.[16]

A 2013 study by NIOSH of firefighters in three cities added evidence to the link between asbestos and malignant mesothelioma, finding that "[t]he population of firefighters in the study had a rate of mesothelioma two times greater than the rate in the U.S. population as a whole" and that "it was likely that the[se] findings were associated with exposure to asbestos, a known cause of mesothelioma."[17]

There is overwhelming consensus in the scientific community that there is no safe level of exposure to asbestos. Thus, as noted by the World Health Organization:

> Bearing in mind that there is no evidence for a threshold for the carcinogenic effect of asbestos, including chrysotile, and that increased cancer risks have been observed in populations exposed to very low levels, the most efficient way to eliminate asbestos-related diseases is to stop using all types of asbestos.[18]

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[12] National Institute for Occupational Safety and Health (NIOSH). Asbestos fibers and other elongate mineral particles: state of the science and roadmap for research. Current Intelligence Bulletin 62. US DHHS, 2011.
[13] WHO. International Agency for Research on Cancer (IARC) Monograph. Asbestos (chrysotile, amosite, crocidolite, tremolite, actinolite, and anthophyllite). Vol 100C, 2012.
[14] "Elimination of asbestos-related diseases," World Health Organization Geneva2014, Available: http://www.who.int/ipcs/assessment/public_health/Elimination_asbestosrelated_diseases_EN.pdf?ua=1.
[15] Dr. L. Christine Oliver, The Threat to Health Posed By Asbestos in the 21st Century In the United States, March 29, 2018, EPA-HQ-OPPT-2016-0736-0124
[16] See note 1.
[17] Daniels RD, Kubale TL, Yiin JH, *et al* Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago and Philadelphia (1950–2009) *Occup Environ Med* 2014;**71**:388-397.
[18] "Chrysotile Asbestos," ed: World Health Organization, 2015.

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Because of the absence of any safe level of exposure to asbestos, a ban on all asbestos use is the only effective way to protect the public. Many nations around the world have taken this step, including all of the members of the European Union. However, the U.S. is a laggard among industrialized nations in lacking virtually any legal prohibition on the mining, importation, use and disposal of asbestos.

ASSESSMENT AND REGULATION OF ASBESTOS UNDER TSCA

In the late 1980s, EPA was on a path to impose comprehensive restrictions on asbestos. In 1989, the Agency issued a rule under section 6(a) of TSCA prohibiting manufacture, importation, processing or distribution in commerce of asbestos in almost all products based on a determination that asbestos presented an "unreasonable risk of injury" under TSCA section 6.[19] However, despite the comprehensive risk analysis supporting the rule, the Fifth Circuit Court of Appeals overturned the ban in 1991 for reasons unrelated to the dangers of asbestos.[20] The court decision later became the poster child for the inability of TSCA to support meaningful action on widespread and unsafe chemicals. As a result, Congress enacted the 2016 Frank R. Lautenberg Chemical Safety for the 21st Century Act (LCSA), strengthening the law's provisions for chemical risk evaluation and regulation.

In December 2016, shortly after the passage of the LCSA, EPA selected ten chemicals for initial risk evaluations. Asbestos was among these 10 substances.[21] Designation of asbestos as an early priority under the amended law was essential because (1) its lethal danger to public health is well-known and abundantly documented, (2) use, mining and importation of asbestos is legal under U.S. law with limited exceptions, and (3) the present and future risk from exposure to asbestos presents grave public health concerns.

LACK OF SUFFICIENT INFORMATION ON IMPORTATION AND USE OF ASBESTOS TO SUPPORT AN INFORMED TSCA RISK EVALUATION

EPA's June 2017 scoping document[22] and June 2018 problem formulation[23] define the products and exposure pathways that EPA intends to address in its asbestos risk evaluation. These

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[19] See note 2.

[20] *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201 (5th Cir. 1991).

[21] See note 3.

[22] EPA, Scope of the Risk Evaluation for Asbestos, June 2017 https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0736-0086

[23] EPA. Problem Formulation of the Risk Evaluation for Asbestos, May 2018, https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0736-0131

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documents limit the evaluation to uses of asbestos products currently in commerce.[24] According to the problem formulation,[25] the Agency has identified the following such products:

Table 2-3. Categories of Conditions of Use Included in the Scope of the Risk Evaluation

Activity	Product Category	Example
Known, Intended, or Reasonably Foreseen Use	Asbestos Diaphragms	Chlor-alkali Industry
	Sheet Gaskets	Chemical Manufacturing
	Oilfield Brake Blocks	Oil Industry
	Aftermarket Automotive Brakes/Linings	Passenger Vehicles
	Other Vehicle Friction Products	Non-passenger Vehicles
	Asbestos Cement Products	Cement pipe
	Other Gaskets and Packing	Equipment Seals
	Woven Products	Imported Textiles

However, with limited exceptions, the problem formulation provides virtually no information about the quantities of asbestos contained in these products, the volumes in which they are produced or imported, the sites where they are used and the number of exposed individuals.

For example, the problem formulation indicates that EPA identified one company that imports asbestos-containing brake blocks for oil field use, but fails to quantify the amount of these imports or how and where they are used and acknowledges that "[i] is unclear how widespread the continued use of asbestos brake blocks is for use in oilfield equipment."[26]

Similarly, the problem formulation identifies a chemical manufacturer, Chemours, which uses imported sheet gaskets containing 80 percent asbestos but does not address how many other manufacturers use these gaskets, the aggregate amount of asbestos they contain, and the conditions of use that may result in release of and exposure to asbestos fibers.[27]

The problem formulation also cites USGS experts who, based on import records, believe that "asbestos-containing products that continue to be imported include . . . asbestos brake linings (automotive brakes/linings, other vehicle friction products), knitted fabrics (woven products), asbestos rubber sheets (i.e., sheet gaskets) and asbestos cement products." However, no information is provided on who is importing these products, what quantities are imported, where

[24] Thus, EPA will not address the risks of ongoing use and disposal of legacy products as well as the future reintroduction of these products into commerce. It has also excluded releases of asbestos into the environment. Petitioners strongly oppose these exclusions, which have the effect of placing important pathways of exposure and risk beyond the purview of the evaluation.
[25] Problem Formulation, at 22.
[26] Problem Formulation, at 25.
[27] Id.

they are distributed and how they are used. As EPA acknowledges, "[i]t is important to note that the import volume of products containing asbestos is not known." [28]

EPA recognizes that consumer exposure could occur from "changing asbestos-containing brakes or brake linings or cutting or using asbestos-containing woven products, and handling of asbestos waste that may result from these activities." However, it then acknowledges that "[c]onsumer exposures will be difficult to evaluate since the quantities of these products that still might be imported into the United States is not known."[29]

The problem formulation also determines that certain asbestos uses that EPA identified in its 2017 scoping document are not ongoing and will be excluded from the risk evaluation. But the basis for these exclusions is at best anecdotal. For example, EPA states that it "had originally identified an asbestos-containing adhesive for use as a mirror adhesive but later determined after contacting the supplier that it is no longer sold."[30] The comment of a single supplier does not mean that there are no other suppliers manufacturing or selling the adhesive. In the absence of reliable, industry-wide information, EPA may thus be erroneously excluding ongoing uses it previously identified or – even worse – failing to identify some ongoing asbestos uses altogether.[31]

In March 2018, United States Public Interest Research Group (U.S. PIRG), a group well-known as an advocate for the public interest, released a report on new studies showing asbestos contamination in Claire's makeup products sold nationally.[32] U.S. PIRG decided to investigate independently after media reports in 2017 claimed that some of children's make-up contain asbestos. Using STAT Analysis Corporation, an independent laboratory that is accredited for asbestos testing, PIRG tested over a dozen makeup products from a variety of stores. They found three products containing asbestos (tremolite), all of which are sold by Claire's.

The discovery of asbestos in Claire's makeup products – and previous detection of asbestos in certain crayons[33] -- raises the possibility that thousands of asbestos-containing products may be imported in the U.S. for sale to consumers. However, no information about these products is provided in the problem formulation – presumably because EPA lacks reliable data on their importation and use.

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[28] Id at 22.

[29] Id at 39.

[30] Id at 19.

[31] For example, a search of import data-bases for shipments arriving in the Seattle and Tacoma ports over the last few years identified imports of asbestos-containing wallboard and floor tiles. The problem formulation does not identify these products as in use in the US although it asserts, without explanation or backup, that some asbestos products listed in import data-bases "are likely misreported." Id. at 26.

[32] D. Gowda and K. Cook-Schultz, "Asbestos Found in Claire's Kids Makeup," U.S. PIRG2018, Available: https://uspirg.org/news/usf/asbestos-found-claire%E2%80%99s-kids-makeup,

[33] KMBC News, *Playskool brand crayons sold at Dollar Tree, Amazon found to contain traces of asbestos,* August 7, 2018, *https://www.kmbc.com/article/playskool-brand-crayons-sold-at-dollar-tree-amazon-found-to-contain-traces-of-asbestos/22667282*

In sum, there are serious questions about whether EPA has identified the full universe of current asbestos-containing products – and whether it has sufficient information about those products it is aware of to inform the public of the extent of asbestos exposure and conduct a meaningful evaluation of potential risks.

GOALS AND SCOPE OF CDR REPORTING

EPA has broad authority under TSCA section 8(a)(1) to require manufacturers and processors of chemical substances to submit such reports as the "Administrator may reasonably require." Promulgated in 2011, the CDR rule implements these reporting provisions The rule was intended to support EPA's risk assessment and reduction efforts by providing basic information about the manufacturing, use and exposure profiles of chemicals in commerce. As the Agency explained in 2011, the new reporting requirements --

> will enhance the capabilities of the Agency to ensure risk management actions are taken on chemical substances which may pose the greatest concern. More in-depth reporting of the processing and use data, more careful consideration of the need for confidentiality claims, and adjustments to the specific data elements are important aspects of this action. By enhancing the data supplied to the Agency, EPA expects to more effectively and expeditiously identify and address potential risks posed by chemical substances and provide improved access and information to the public.

76 Federal Register 50818, 30819 (Aug. 16, 2011). Under the rule, reporting is required for all chemicals manufactured or imported at a site in amounts of 25,000 pounds or more in a given reporting year. For chemicals already regulated under certain TSCA provisions, the reporting threshold is set at 2,500 pounds per reporting year. Reports must be filed using what the Agency calls a "Form U." Manufacturers and importers subject to the CDR must submit these forms to the Agency every four years. The latest reporting cycle was completed in the fall of 2016; the application of reporting requirements was based on activities conducted in calendar years 2012-2015, and 2015 was the principal reporting year. The next reporting cycle will end in the fall of 2020.

Under the rule, a Form U must be filed for each manufacture or import site and include import/manufacture volume for each of the last four years, the number of workers exposed and basic information about site operations. It must also include information about industrial, commercial and consumer uses of the substance at other sites and the potential for exposure associated with these downstream activities.

In expanding the scope of reporting to capture these data elements, EPA emphasized that this "exposure information is an essential part of developing risk evaluations and, based on its experience in using this information, the Agency believes that collecting this exposure information is critical to its mission of characterizing exposure, identifying potential risks, and noting uncertainties for [reportable] chemical substances." 76 Federal Register 50823.

EXCLUSION OF ASBESTOS FROM CDR REPORTING

In May of 2017, ADAO and other groups notified EPA that Occidental Chemical Corporation, one of 3 US companies who use "asbestos diaphragm cells" in the chlor-alkali process for manufacturing chlorine and other products such as caustic soda, had failed to report its asbestos imports (totaling several hundred tons) for the 2016 CDR update.[34] Instead of seeking the company's compliance with the CDR, EPA advised Occidental in a letter dated July 28, 2017 that asbestos imports were not subject to reporting because, under 40 C.F.R, §711.6(a)(3), reporting is not required for "naturally occurring chemical substances."[35]

EPA's interpretation of the CDR rule means that no manufacturers or importers of asbestos or asbestos-containing products were required to report on their activities. Accordingly, the rule has played no role in informing EPA about asbestos uses that could be addressed in the Agency's TSCA risk evaluation. This loophole in the rule has resulted in a troubling – and wholly avoidable – lack of reliable information about who is importing asbestos and in what quantities, where and how asbestos is being used in the U.S., and who is being exposed and how that exposure is occurring.[36]

CLOSING THE CDR LOOPHOLE: HOW THE RULE SHOULD BE AMENDED

This petition asks that EPA eliminate the asbestos loophole in the CDR rule so that asbestos is subject to CDR reporting. We request that EPA amend 40 C.F.R. §711.6(a)(3) so that the exemption for naturally occurring chemical substances is inapplicable to asbestos. This can be accomplished by rewording the first sentence of this exemption so it covers "[a]ny naturally occurring chemical substance, as described in 40 CFR 710.4(b), *except for asbestos*."[37]

Because EPA's asbestos risk evaluation is ongoing, the rule revision adding asbestos to the CDR rule should trigger immediate reporting on asbestos for the 2012-2016 reporting cycle. For this

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[34] As EPA noted in the problem formulation, the other two chlor-alkali producers using asbestos diaphragm cells, Axiall Corp. and Olin Corp., did report their asbestos imports under the CDR rule. Problem formulation at 21. According to the problem formulation, these were the only companies reporting on asbestos under the rule. While USGS has estimated how much raw asbestos is being imported for use in chlor-alkali production using customs records, full CDR reporting would assure more reliable import volume data and enable a precise breakdown of imports by producer. It would also clarify whether raw asbestos is also being imported into the U.S, for other purposes.

[35] This letter is attached.

[36] While this petition is focused on asbestos, the petitioners are generally troubled by the exemption of naturally occurring chemical substances from CDR reporting. This exemption could apply to lead, cadmium, mercury and arsenic, all of which are known to be highly toxic, and are candidates for risk evaluation and regulation under TSCA. CDR reporting on these substances would provide valuable information that could inform EPA's efforts under TSCA and help the public understand sources of exposure and risk. We recommend that EPA delete the exemption from the CDR rule in its next revision of CDR provisions.

[37] Although we are asking EPA amend the CDR rule, a number of the petitioners previously argued that, as a chemical regulated under section 6, asbestos was subject to reporting notwithstanding its possible classification as a naturally occurring substance. We are not waiving this position and reserve the right to challenge EPA's interpretation of CDR requirements as applied to asbestos.

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purpose, 40 C.F.R. § 711.20 should be amended to include the following sentence: "For asbestos, the 2016 CDR submission period is from January 1, 2019 to April 31, 2019."[38] This will make it possible for EPA to review and analyze the reports submitted while the risk evaluation is underway and to revise the draft evaluation on the basis of new information reported on asbestos importation and use. To assure that it has time to consider the CDR reports, EPA should extend the completion date for the asbestos risk evaluation by six months under section 6(b)(4)(G)(ii).

The rule revisions should also modify the application of reporting requirements to asbestos so that EPA obtains the comprehensive information on asbestos importation and use it needs for its ongoing risk evaluation. We request the following modifications:

1. As a substance regulated under TSCA section 6, asbestos would be subject to a reporting threshold of 2,500 pounds (1,134 kg) in any year in the reporting period under 40 C.F.R. § 711.8(b). This threshold is too high in view of the absence of any safe level of exposure to asbestos and the need for comprehensive use and exposure information for the ongoing risk evaluation. We request that the reporting threshold for asbestos be lowered to 10 pounds for any year in the reporting period.

2. 40 C.F.R. § 711.10(b) exempts from reporting persons who import a reportable substance as part of an article. Since a large number of the asbestos-containing products historically in use are articles, this exemption would prevent EPA from obtaining a considerable amount of useful information about asbestos use and exposure in the U.S. EPA should revise the article exemption in § 711.10 so it is inapplicable to asbestos. Reporting should be required for all imported articles in which asbestos is present at detectable levels.

3. 40 C.F.R. § 711.10(c) exempts from CDR reporting activities described in 40 C.F.R. §720.30(g) and (h). Among these activities are manufacture or import of a substance as an impurity ((h)(1)) or as a byproduct which is not used for commercial purposes ((h)(2)).These exemptions should be inapplicable to asbestos since the low levels of asbestos that have been found in makeup and crayons may be unintended contaminants that comprise byproducts and impurities. EPA needs information about asbestos-contaminated consumer products to conduct a complete and protective risk evaluation.

4. Currently, processors are not subject to CDR requirements. However, we request that EPA require CDR reporting by processors of asbestos-containing products. In many cases, importers will be unable to provide the detailed information about use and exposure necessary for full understanding of the risks posed by these products. Therefore, the additional information available to processors will be essential. EPA should thus add a paragraph to 40 C.F.R. § 711.8 designating processors of asbestos and asbestos-containing articles as persons required to submit CDR reports.

[38] This reporting schedule assumes that EPA promulgates revisions to the CDR rule by December 31, 2018. While this is an ambitious schedule, it should be workable given the surgical nature of the rule changes.

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TRANSPARENCY AND PUBLIC DISCLOSURE OF REPORTED INFORMATION

The information to be reported under the requested amendments to the CDR rule will be invaluable not only to EPA risk and exposure assessors but to workers and members of the general public. Knowledge of which entities are importing and using asbestos, where and how these activities occur and the quantities of asbestos involved is critical to identifying exposed populations and pathways of exposure and taking steps to reduce risks. In amending the CDR rule, EPA should therefore commit to making all reports submitted on asbestos publicly available notwithstanding any claims that these reports contain CBI.

TSCA section 14 provides two bases for overriding CBI claims in the interest of transparency and public disclosure. First, section 14(d)(3) provides that CBI protections will not apply if the Agency "determines that disclosure is necessary to protect health or the environment against an unreasonable risk of injury." Given the significant risk of harm that asbestos presents at any level of exposure, knowledge of how, where and in what quantities asbestos and asbestos-containing products are being imported and used is clearly necessary to protect against unreasonable risks and EPA would have an ample basis to make a determination to that effect. Second, section 14(d)(7) authorizes disclosure of CBI where EPA "determines that disclosure is relevant in a proceeding under this Act." The ongoing asbestos risk evaluation is such a "proceeding" and information on asbestos importation and use is clearly "relevant" because it has a direct bearing on EPA's determinations of exposure and risk and the ability of the public to comment on these elements of the risk evaluation.

EPA's CDR revisions should invoke both of these provisions and include a mechanism for promptly disclosing all reports on asbestos and asbestos-containing products.

CONCLUSION

For the above reasons, EPA should grant this petition and promptly initiate rulemaking under section 8(a) of TSCA to add asbestos to the CDR rule. As modified, the CDR rule should immediately trigger reporting on asbestos for the 2012-2016 reporting cycle, lower the reporting threshold to 10 pounds, and broaden the scope of reporting to include imported articles, asbestos-contaminated products and processors. EPA's CDR revisions should include a mechanism for promptly disclosing all reports on asbestos to the public.

We stand ready to work with you and your staff as you review the petition and determine whether to take the steps that the petition requests.

Please contact ADAO counsel, Bob Sussman, with any questions about this petition. He can be reached at:

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 28 2017

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Rebecca J. Rentz, Esquire
Senior Environmental Counsel
Occidental Petroleum Corporation
5 Greenway Plaza
Suite 110
Houston, TX 77046

Dear Ms. Rentz:

This is in response to your request for clarification whether EPA's Chemical Data Reporting (CDR) rule required Occidental Chemical Corporation ("Occidental") to report imports of asbestos that occurred during the reporting period for the 2016 CDR. For the reasons described below, based on the information available to EPA, EPA believes that these imports were not required to be reported under CDR.

Asbestos is a chemical substance that is the subject of a rule promulgated under TSCA section 6.[1] Section 6 regulatory status can affect, in some respects, how CDR requirements apply to a chemical substance. For example, the reporting threshold for a section 6-regulated chemical substance is 2,500 lbs. rather than 25,000 lbs.[2] The pertinent question here, however, is whether the naturally occurring chemical substance (NOCS) exemption applied to the asbestos that Occidental imported. If the NOCS exemption applies, then the reporting threshold is irrelevant. This is reflected in the *2016 Instructions for TSCA Chemical Data Reporting ("2016 Instructions")*, page 2-2.[3]

The availability of the NOCS exemption is not affected by asbestos' regulatory status. This is clear from 40 CFR 711.6, which lists the types of CDR reporting exemptions that *are* eliminated once a chemical becomes subject to regulation under TSCA section 6. The NOCS exemption is omitted from that list. This is also reflected in the *2016 Instructions* (affirmatively noting, on page 2-12, that the NOCS exemption is not among the exemptions that are eliminated when a chemical substance has a special regulatory status).

The NOCS exemption is based on the definition of a "naturally occurring chemical substance" at 40 CFR 710.4(b). To qualify, a chemical substance must be unprocessed, processed only as described in 40 CFR 710.4(b)(1)(ii), or extracted from air. The CDR regulations make clear that these limitations are

[1] 40 CFR Part 763.
[2] 40 CFR 711.8(b).
[3] The *2016 Instructions* are publicly available at https://www.epa.gov/sites/production/files/2016-05/documents/instructions_for_reporting_2016_tsca_cdr_13may2016.pdf

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intended to distinguish between a chemical substance that was manufactured "as described in 40 CFR 710.4(b)" and a chemical substance that was manufactured by other means.[4]

The pertinent manufacturing here is the import of the asbestos (TSCA itself defines import as manufacturing).[5] Occidental has represented that, prior to the point of import, the asbestos had only been processed by mechanical and gravitational means, which are within the scope of 40 CFR 710.4(b)(1)(ii).[6] Assuming this is correct, the asbestos was manufactured as described in 40 CFR 710.4(b). Under these circumstances, the NOCS exemption applied and the import was exempt from CDR reporting. This would be a scenario as described in the *2016 Instructions* at 2-12 ("a naturally occurring chemical substance remains naturally occurring when it is imported").

EPA understands that Occidental produced certain articles known as "asbestos diaphragms" using the imported asbestos. Post-import activities are irrelevant to whether the imports themselves were entitled to the NOCS exemption. The NOCS exemption for the imports is not contingent on Occidental thereafter limiting its processing of the imported chemicals to the activities described in 40 CFR 710.4(b). The CDR regulations make clear that the relevant issue for determining whether the asbestos import qualified for the exemption is whether the substance was within the scope of the NOCS exemption *when imported*.[7] Post-import activities associated with the imported asbestos would need to be separately evaluated for reportability under CDR.

Sincerely,

Jeffery T. Morris, Ph.D.
Director
Office of Pollution Prevention and Toxics

cc:
Lynn L. Bergeson, Bergeson & Campbell, P.C.
Kevin Mclean, USEPA OGC
Greg Sullivan, USEPA OECA

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[4] 40 CFR 711.6.
[5] TSCA § 3(9)
[6] *Presentation to EPA: Naturally Occurring Chemical Substances Exemption CDR* at, July 11, 2017, p. 6.
[7] At 40 CFR 711.6, the CDR regulation draws a distinction based on how the chemical substance was manufactured (including imported): either "as described in 40 CFR 710.4(b)" or "by means other than those described in 40 CFR 710.4(b))." Similarly, the *2016 Instructions* clarify that the pertinent processing is that which describes "the means by which [minerals and certain agricultural products] are produced or isolated." The asbestos at issue here was manufactured when it was imported. The means by which the asbestos was manufactured are described by the processing leading up to the point of import.

Lloyd, Tyler

From: Bob <bobsussman1@comcast.net>
Sent: Thursday, November 29, 2018 3:49 PM
To: Baptist, Erik; Morris, Jeff; Bertrand, Charlotte; Henry, Tala; Vendinello, Lynn; Fehrenbacher, Cathy; Grant, Brian; Lloyd, Tyler
Cc: 'Linda Reinstein'
Subject: RE: TSCA Section 21 Petition

Dear Dr. Morris:

Thank you for your letter of October 4, 2018 acknowledging receipt of the September 26, 2018 petition filed under section 21 of TSCA by ADAO and five other groups seeking rulemaking to add asbestos to the Chemical Data Reporting (CDR) requirements and to strengthen and expand these requirements as applied to asbestos.

My purpose in writing now is to incorporate in the petition by reference all the materials in EPA-HQ-OPPT-2016-0736, the docket for the TSCA Review and Risk Evaluation for asbestos. Please consider these materials in deciding what action to take on the petition.

Thank you.

Bob Sussman

Robert M. Sussman
Sussman & Associates
3101 Garfield Street, NW
Washington DC 20008
(202)-758-2227 (H)
(202)-716-0118 (C)
bobsussman1@comcast.net

From: Bob [mailto:bobsussman1@comcast.net]
Sent: Wednesday, September 26, 2018 8:35 AM
To: 'Wheeler.andrew@Epa.gov' <Wheeler.andrew@Epa.gov>; 'Beck.nancy@Epa.gov' <Beck.nancy@Epa.gov>; 'Baptist.erik@Epa.gov' <Baptist.erik@Epa.gov>; 'morris.jeff@epa.gov' <morris.jeff@epa.gov>; 'Bertrand.charlotte@Epa.gov' <Bertrand.charlotte@Epa.gov>; 'Henry.tala@Epa.gov' <Henry.tala@Epa.gov>; 'Vendinello.lynn@Epa.gov' <Vendinello.lynn@Epa.gov>; 'Fehrenbacher.cathy@Epa.gov' <Fehrenbacher.cathy@Epa.gov>; 'Grant.brian@Epa.gov' <Grant.brian@Epa.gov>
Cc: 'Linda Reinstein' <linda.reinstein@gmail.com>
Subject: TSCA Section 21 Petition

Attached is a TSCA section 21 petition we are hereby filing with EPA on behalf of the Asbestos Disease Awareness Association, American Public Health Association, Center for Environmental Health, Environmental Working Group, Environmental Health Strategies Center and Safer Chemicals, Healthy Families. The petition requests that EPA initiate rulemaking under TSCA section 8 to add asbestos to Chemical Data Reporting (CDR) requirements and to strengthen and expand these requirements as applied to asbestos.

We would be pleased to discuss the petition in greater detail with the Agency.

Thank you for your consideration.

Robert M. Sussman
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Washington DC 20008
(202)-758-2227 (H)
(202)-716-0118 (C)
bobsussman1@comcast.net

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Contents of FRN Signature Package

- Petition (received 9/27/18)
- Follow-up Email from Bob Sussman (received 11/29/18)
- Federal Register Notice - Asbestos; TSCA Section 21 Petition; Reasons for Agency Response
- Agency Response Letter
- Action Memo
- OGC Concurrence
- Action Information
- Docket Verification and Certification Form
- Typesetting Funding Request Form

Message

From: Hofmann, Angela [Hofmann.Angela@epa.gov]
Sent: 3/6/2019 6:57:46 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Kadeli, Lek [Kadeli.Lek@epa.gov]; Morris, Jeff [Morris.Jeff@epa.gov]; Henry, Tala [Henry.Tala@epa.gov]; Hartman, Mark [Hartman.Mark@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Layne, Arnold [Layne.Arnold@epa.gov]; Berkley, Bruce [Berkley.Bruce@epa.gov]
CC: Schmit, Ryan [schmit.ryan@epa.gov]; Scheifele, Hans [Scheifele.Hans@epa.gov]; Lintner, Colby [Lintner.Colby@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Hoyt, Sarita [Hoyt.Sarita@epa.gov]; Smoot, Cameo [Smoot.Cameo@epa.gov]; OCSPP OPMO RICS [OCSPP_OPMO_RICS@epa.gov]; Hanley, Mary [Hanley.Mary@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Tyree, JamesN [tyree.jamesn@epa.gov]
Subject: Final OCSPP Spring Reg Agenda
Attachments: ADPTracker-Report-RegAgenda_oppt_2019-03-04.docx; ADPTracker-Report-RegAgenda_opp_2019-03-04.docx

Hi everyone,
Nancy's comments from Monday have been addressed. All the new OPPT items have been successfully added, but two new OPP items did not make it in for this submission. We can still add the OPP items when we get OMB comments or the review copy, so I've left them listed as a reminder.
Based on the updates here, I will be working with the offices to provide a planning report for upcoming actions in 2019. We used to regularly do that report in the past and it was quite helpful for planning purposes. I'd like to be sure that it provides a valuable tool for you all too, so please provide honest and constructive feedback. Thanks.
- Angela
Angela Hofmann
202-564-0258

Message

From: Bolen, Derrick [bolen.derrick@epa.gov]
Sent: 6/22/2018 3:41:10 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]
Subject: BNA Slides
Attachments: June BNA Webinar - TSCA Slides 1.pptx; June BNA Webinar - TSCA Slides 2.pptx

Which do you like better?

Thank you,
Derrick Bolen

Message

From: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Sent: 8/20/2018 11:20:04 AM
To: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
CC: Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: RE: Snopes asbestos correction.2.docx
Attachments: Snopes asbestos correction clean.docx

Here this is cleaned up to incorporate Nancy's and Charlotte's comments. Let me know if you have further edits/comments on this. If not, I'll work with OPA to get the corrections to Snopes. Thanks.

From: Bertrand, Charlotte
Sent: Friday, August 17, 2018 4:54 PM
To: Dunton, Cheryl <Dunton.Cheryl@epa.gov>
Cc: Beck, Nancy <Beck.Nancy@epa.gov>; Baptist, Erik <Baptist.Erik@epa.gov>
Subject: Snopes asbestos correction.2.docx

Hi – I've added a few extra comments to Nancy's. Thanks!

Message

From: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
Sent: 8/17/2018 8:53:39 PM
To: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
CC: Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: Snopes asbestos correction.2.docx
Attachments: Snopes asbestos correction.2.docx

Hi – I've added a few extra comments to Nancy's. Thanks!

Message

From: Morris, Jeff [Morris.Jeff@epa.gov]
Sent: 9/6/2018 6:29:52 PM
To: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Hanley, Mary [Hanley.Mary@epa.gov]
Subject: ISSA slides
Attachments: ISSA 11 September 2018 Jeff Morris.pptx

Attached are the slides I will use for Tuesday's ISSA meeting. They want a broad TSCA update. They've all been cleared by OGC and used before.

Jeff

EPA Office of Chemical Safety & Pollution Prevention

Implementing the Amendments to the TOXIC SUBSTANCES CONTROL ACT (TSCA)

Jeff Morris, Director
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency

Presentation to the ISSA
September 11, 2018

TSCA Amendments

- "The Frank R. Lautenberg Chemical Safety for the 21st Century Act"
  - Amends and updates the Toxic Substances Control Act (TSCA)
  - Signed by the President on June 22, 2016
  - Effective immediately
- Significance
  - First major update to TSCA in 40 years (1976)
  - Passed with overwhelming bipartisan support in both the U.S. House and Senate
  - Received support from chemical industry and downstream users of chemicals, NGOs, and other stakeholders

Framework Rules

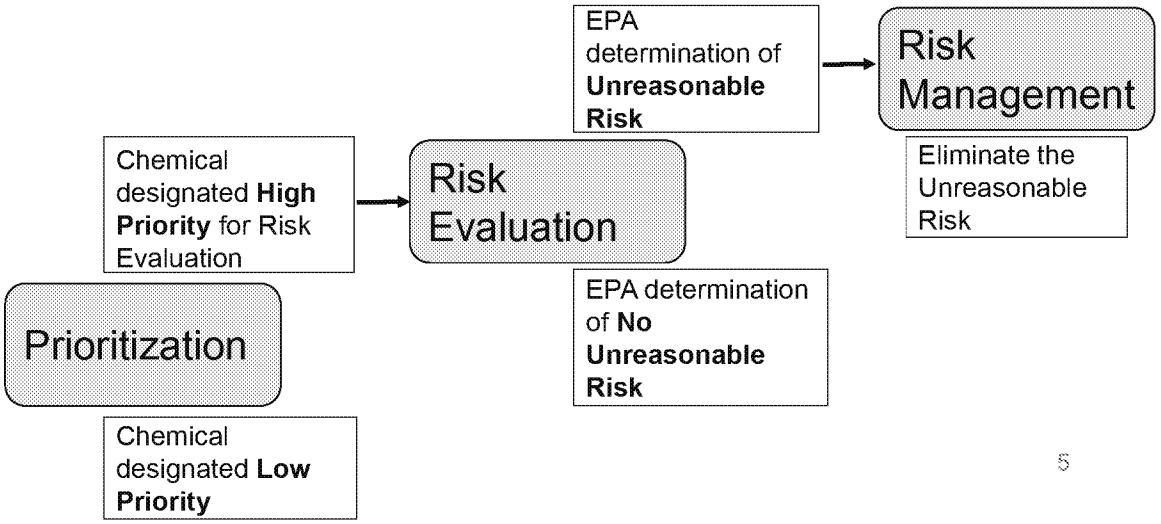
Amended TSCA called for EPA to promulgate a number of rules to set up the procedures EPA will use to implement, and otherwise align, EPA's chemical management program with the new requirements and responsibilities in the law:

- **Active/Inactive Inventory Reporting Rule**
- **Prioritization Rule**
- **Risk Evaluation Rule**
- **Fees Rule**

TSCA Year 2 Accomplishments

- Asbestos Significant New Use Rule
- Problem Formulations
- Systematic Review
- Mercury Reporting Rule
- Strategy to Reduce Animal Testing
- Transparency and CBI
  - Unique Identifier
  - Generic Name Guidance
  - Expanded Access to CBI Guidance
- Dust-Lead Hazard Standards Proposal

Existing Chemicals under TSCA



Prioritization

Statutory Requirements

EPA must establish a risk-based screening process and criteria for designating a chemical substance as either:

- ***High-priority substance*** – may present an unreasonable risk of injury to health or the environment because of a potential hazard and a potential route of exposure under the conditions of use, including an unreasonable risk to a "potentially exposed or susceptible subpopulation", without consideration of costs or other non-risk factors; *OR*
- ***Low-priority substance*** – EPA concludes, based on information sufficient to establish, that the chemical does not meet the standard for high-priority

Next-steps for Prioritization

- No “pre-prioritization process” in final rule
- EPA initiated additional public comment opportunities to discuss how to identify potential candidate chemicals ready for Prioritization.

  November 2017. *EPA initiated stakeholder engagement; released meeting materials and discussion document for public comment*

  December 2017. *EPA held a public meeting*

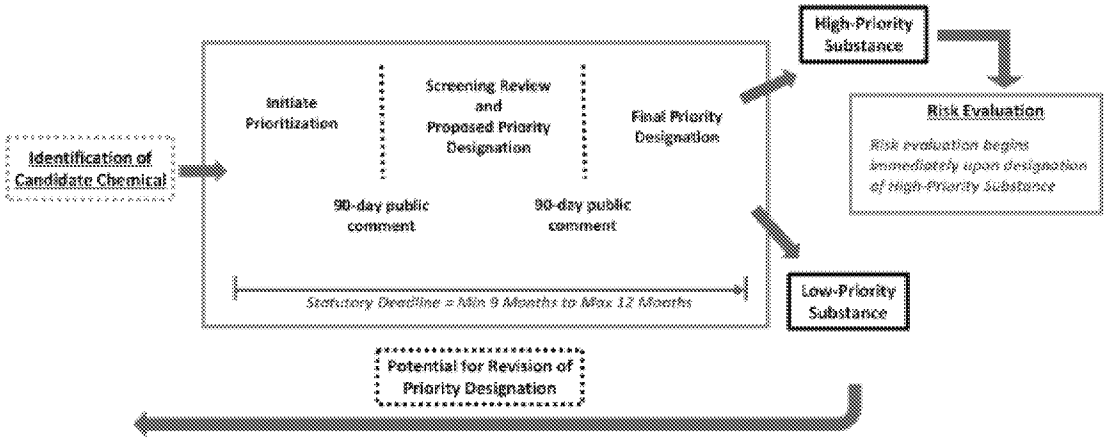
  January 25, 2018. *Comments due to the Agency*

  June 2018. *Conclude stakeholder engagement; identify approach/tool or set of approaches/tools to guide pre-prioritization*

  June 2018 – March 2019. *Implement pre-prioritization, guided by approach/tool or set of approaches/tools*

  Jan. 2018 – December 2019*. Prioritize at least 20 high- and 20 low-priority chemicals*

Prioritization Process and Timeline



Risk Evaluation
Statutory Requirements

- EPA must establish by rule a process for risk evaluation
  - Determine if a chemical presents an unreasonable risk of injury to health or the environment under conditions of use
  - Without consideration of cost or other non-risk factors
  - Including unreasonable risk to potentially exposed or susceptible subpopulation(s) determined to be relevant to the evaluation
- This process must be completed within 3 – 3.5 years
- For each risk evaluation completed, EPA must designate a new high-priority chemical
- By December of 2019, EPA must have 20 chemicals designated as high-priority and undergoing risk evaluations
  - Additional risk evaluations may come from manufacturer requests

First 10 Risk Evaluations

- 10 chemicals identified for evaluation on December 19, 2016

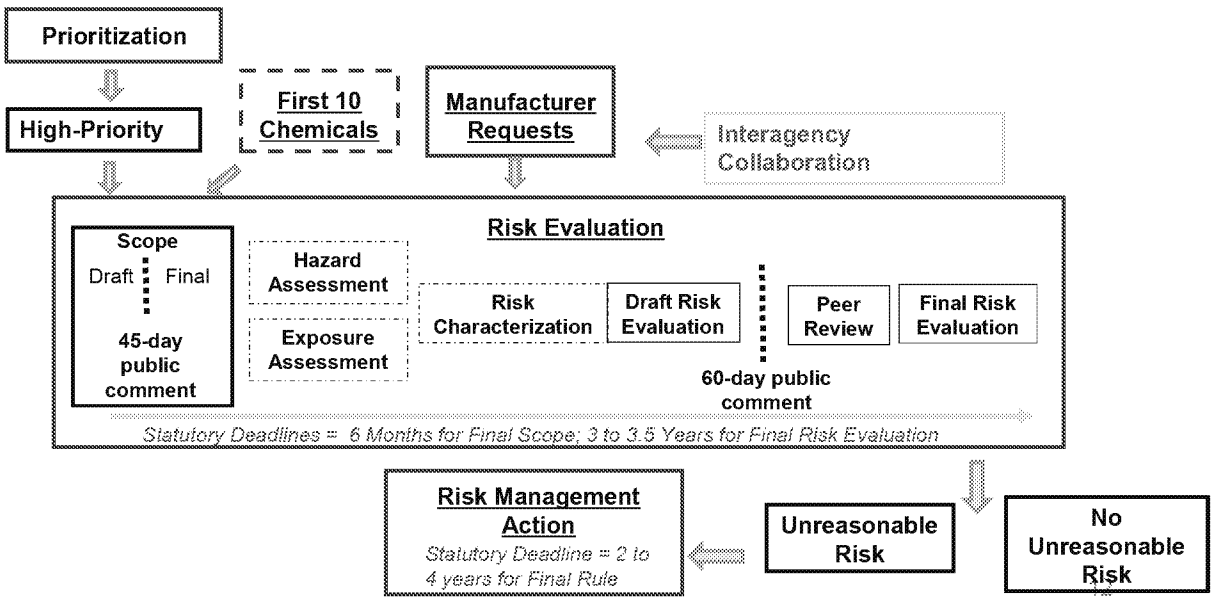
1, 4 Dioxane	Methylene Chloride
1-Bromopropane	N-Methylpyrolidone
Asbestos	Pigment Violet 29
Carbon Tetrachloride	Trichloroethylene
Cyclic Aliphatic Bromide Cluster (HBCD)	Tetrachloroethylene

- Scope documents published June 22, 2017
- Problem Formulation documents issued Spring 2018
- Developing draft risk evaluations

Conditions of Use

- Means the circumstances, as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, use, or disposed of.
  - EPA generally does not view uses that are legacy uses and intentional misuse (e.g., purposeful inhalation) as conditions of use
- Statutory language for scope includes "that the Administrator expects to consider"
  - EPA may exclude from an individual risk evaluation some activities that are conditions of use (e.g., *de minimis* use that presents low risk)
- Risk determinations – A risk determination will be made for each condition of use EPA includes in the risk evaluation
  - EPA may make early determinations on condition(s) of use once statutory and regulatory requirements for a risk evaluation, including a peer review, are fulfilled

Risk Evaluation Process and Timeline



New Chemicals

- TSCA amendments require EPA to make an affirmative finding on new chemicals or significant new uses of existing chemicals, before those chemicals can enter the market or manufacturing/processing for new uses can commence
- EPA continues to improve processes to meet new requirements in law
  - Leveraging staff and contractor resources
  - Continuing IT enhancements
- Public meeting held on December 6, 2017
  - Discussed EPA's efforts to implement TSCA's statutory changes in the evaluation of new chemical substances and increase review process efficiencies
  - Discussed ways to ensure submissions include information needed for expeditious reviews
  - Provided additional information on EPA reviews and opportunities for public comment

New Chemicals

Presents an unreasonable risk

- Section 5(f) order
  - Restriction/prohibition of manufacturing, processing, or distribution
- Section 6(a) proposed rule
  - Restriction/prohibition of manufacturing, processing, distribution, or disposal

Not likely to present an unreasonable risk

- Commercialization can commence after the determination is made
- Section 5(g) – Statement in the FR

Information is insufficient to permit a reasoned evaluation of the risk.

- Section 5(e) – Regulation pending more information
- Section 5(e) order

Insufficient information to permit a reasoned evaluation **and may present** unreasonable risk

- Section 5(e) – Regulation pending more information
- Section 5(e) order

Priorities

- Establishing a Fees Program
- TSCA Inventory Notification (Active-Inactive)
- Completing First 10 Risk Evaluations
- Selecting the Next 40 Chemicals for Prioritization
- Addressing Persistent, Bioaccumulative, and Toxic Chemicals
- Enhancing New Chemicals Review

For More Information

https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/frank-r-lautenberg-chemical-safety-21st-century-act

Contact EPA at

https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/forms/assessing-and-managing-chemicals-under-tsca

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 7/11/2018 7:16:22 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
CC: Bolen, Derrick [bolen.derrick@epa.gov]
Subject: Updating OPPT Policy Fact Sheets
Attachments: OCSPP Gen-X.04.04.18 rev from policy.docx; OCSPP-Asbestos.4.5.2018 THM JM.docx; OCSPP-Lead Dust.4.5.2018 npcd cmts OP Policy Factsheet THM.docx; OCSPP-TSCA New Chemicals.4.4.2018cb hds JM.docx; Section_26l_Rule_Existing_Chemicals_Facsheet_4-2-18 rev from policy.DOCX; TSCA Existing Chemicals 4.3.18 rev from policy.docx

Hi,
Derrick has asked for updated fact sheets to get ahead of the curve before we are asked to provide them. I am attaching the latest ones for OPPT. Did you want us to roll in the CDR, formaldehyde, PBT rule or the CBI claims procedural rule or anything else?
Thanks
M

Message

From: Strauss, Linda [Strauss.Linda@epa.gov]
Sent: 3/15/2019 10:13:50 PM
To: Bolen, Derrick [bolen.derrick@epa.gov]; Malloy, Ruth [malloy.ruth@epa.gov]
CC: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Dunton, Cheryl [Dunton.Cheryl@epa.gov]; Altieri, Sonia [Altieri.Sonia@epa.gov]
Subject: Agenda for Monday AM COMS meeting
Attachments: AGENDA Monday Communications Meeting.docx

Derrick or Ruth, this is late notice, but is it possible for you to print 10 copies Monday morning – for the 9:30 meeting?

Linda

AGENDA

Communications Meeting

1. Mercury Reporting, 3/18
2. Candidate for Prioritization – High, Low, 3/21
3. PV-29, week of 3/18
4. CDR, week of 3/18
5. TSCA CBI Review Plan, week of 3/18
6. Asbestos Awareness Week, 4/1-7
7. Final Asbestos SNUR?
8. Long-Term Binning
9. Draft RE's – 1-4 Diox, Asbestos, HBCD?
10. Chemical Watch Outlook article
11. Pat Rizutto Interview
12. Biostimulants OPP Update
13. Sulfoxaflor Desk Statements
14. Re-hearing of Chlor Decision, 3/25
15. Glyphosate Proposed Interim Decision, 4/

BY ELECTRONIC MAIL AND FEDERAL EXPRESS

September 25, 2018

Andrew Wheeler
Acting Administrator
U.S. Environmental Protection Agency
Mail code: 1101A
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: *Petition under TSCA Section 21 to Require Reporting on Asbestos Manufacture, Importation and Use under TSCA Section 8(a)*

Dear Acting Administrator Wheeler:

This petition under section 21 of the Toxic Substances Control Act (TSCA), 15 U.S.C. §2620, is submitted by the Asbestos Disease Awareness Organization (ADAO), American Public Health Association (APHA), Center for Environmental Health (CEH), Environmental Working Group (EWG), Environmental Health Strategy Center (EHSC), and Safer Chemicals Healthy Families (SCHF). Petitioners are nonprofit public health and environmental organizations committed to addressing the unreasonable risk of injury that asbestos continues to pose to the US population. We support a robust and comprehensive risk evaluation on asbestos under section 6(b) of amended TSCA, followed by rulemaking to ban asbestos under section 6(a) of the law.

As authorized by section 21(a) of TSCA, our petition seeks initiation of a rulemaking under section 8(a) of TSCA, 15 U.S.C. §2607, to amend the TSCA Chemical Data Reporting (CDR) rule, 40 C.F.R. Part 711. The CDR amendments we seek would accomplish three purposes:

(1) add asbestos to the CDR rule, thereby requiring reporting on importation and use of asbestos and asbestos-containing products in the US,

(2) lower the reporting threshold, eliminate exemptions for impurities and articles, and require reporting by processors in order to assure that EPA has the information on asbestos necessary to meet its TSCA responsibilities, and

(3) determine that reports submitted on asbestos are not subject to protection as confidential business information (CBI) because disclosure is necessary to protect against an unreasonable risk of injury to health under section 14(d)(3) of TSCA.

BASIS FOR GRANTING THE PETITION

Asbestos is among the most dangerous chemicals ever produced, with expert bodies agreeing that there is no safe level of exposure. Recent research indicates that nearly 40,000 asbestos-

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related deaths occur in the US each year.[1] In 1989, EPA determined that nearly all uses of asbestos presented an "unreasonable risk of injury" under section 6 of TSCA.[2] The basis for this conclusion is even more compelling today.

In December of 2016, EPA selected asbestos as one of the initial 10 chemicals to undergo risk evaluations under amended TSCA.[3] Then, in June of this year, EPA issued a Problem Formulation document which outlines how EPA plans to conduct that evaluation.[4]

The Problem Formulation attempts to identify the asbestos uses that EPA will address in its risk evaluation but its description of these uses is limited, vague and incomplete and the Agency acknowledges that "the import volume of products containing asbestos is not known." Without adequate information on ongoing importation and use of asbestos and asbestos-containing products, the risk evaluation will fail to provide a meaningful picture of the threat that asbestos poses to public health and citizens will be in the dark about exposure to asbestos in their communities and places of employment.

The CDR rule is EPA's primary tool under TSCA for obtaining basic information on the manufacture, importation and use of chemicals and the nature and extent of exposure to these substances. However, as EPA advised a major asbestos importer and user (Occidental Chemical) on July 28, 2017, asbestos is exempt from CDR reporting because it is a "naturally occurring substance."[5] This loophole in the rule has resulted in a troubling – and wholly avoidable – lack of reliable information about who is importing asbestos and in what quantities, where and how asbestos is being used in the US, and who is being exposed and how that exposure is occurring. As a consequence, the public is not adequately informed about the risks that asbestos presents to health in the US, and EPA itself lacks the basic information required for a complete and informed risk evaluation that assures that unsafe asbestos uses are removed from commerce.

This petition asks EPA to close the CDR reporting loophole for asbestos by expeditiously amending the CDR rule so asbestos is subject to reporting and to frame these reporting requirements broadly to assure that they capture all imports and domestic uses of asbestos and asbestos-containing products. Petitioners further request that the amended CDR rule require immediate submission of reports on asbestos for the 2016 reporting cycle. This will maximize EPA's ability to use the information reported to conduct the ongoing asbestos risk evaluation and the subsequent risk management rulemaking under TSCA section 6(a). Finally, petitioners request that EPA determine under TSCA section 14(d)(3) that the CDR reports on asbestos will

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[1] S. Furuya, O. Chimed-Ochir, K. Takahashi, A. David, and J. Takala, "Global Asbestos Disaster," International Journal of Environmental Research and Public Health, vol. 15, no. 5, p. 15, 2018.

[2] Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibitions (54 Federal Register 29460, July 12, 1989) (FRL–3476–2),

[3] 81 Federal Register 91927 (December 19, 2016).

[4] 83 Federal Register 26998 (June 11, 2018).

[5] A copy of this letter from Jeffrey Morris, Director of OPPT, to Rebecca Rentz, Esq. of Occidental Petroleum is attached to this petition.

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not be withheld as CBI because their disclosure is necessary to protect against an unreasonable risk of injury. This will ensure that the public is fully informed about the presence of asbestos in their communities and the dangers of unsafe asbestos exposure.

EPA's failure to require TSCA reporting on asbestos to inform its ongoing risk evaluation is a marked departure from previous EPA initiatives to address the risks of asbestos. To support its comprehensive rulemaking to ban most uses of asbestos in the 1989, EPA used its TSCA section 8(a) reporting authority in 1982 to collect information on industrial and commercial uses of asbestos.[6] Congress then enacted, and President Reagan signed, the Asbestos Information Act of 1988 imposing a one-time requirement for current and former manufacturers and processors to report asbestos-containing products to EPA.[7] EPA collected extensive information under the law, which it released to the public on February 13, 1990.[8] By not utilizing these mandatory information collection tools, EPA has been severely handicapped in its ability to identify and assess all pathways of asbestos exposure that may be endangering public health. As a result, its risk evaluation will be weak, incomplete and unprotective.

By granting this petition, EPA will obtain, and be able to release to the public, the same level of information on asbestos use on which it based previous regulatory efforts to protect against asbestos risks and will have an informed basis for its ongoing asbestos risk evaluation.

DESCRIPTION OF PETITIONERS

Founded in 2004, Asbestos Disease Awareness Organization (ADAO), an independent 504(c)(3) non-profit organization, has spent over a decade working to prevent asbestos-caused diseases. ADAO works nationally and internationally with the leading scientists, medical doctors, industrial hygiene specialists, legislators and community advocates to protect public health and our environment. As a leader in education, ADAO hosts an annual international academic conference, now in its 14th year, to promote scientific advances in the treatment and cure of asbestos disease and advocate for the elimination of all asbestos exposures throughout the world.

The American Public Health Association (APHA) champions the health of all people and all communities, strengthens the profession of public health, shares the latest research and information, promotes best practices, and advocates for public health policies grounded in research. APHA represents over 20,000 individual members and is the only organization that combines a nearly 150-year perspective and a broad-based member community with an interest in improving the public's health. APHA has long advocated for policies to protect the public from exposure to harmful chemicals and other hazardous substances, including asbestos.

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[6] 47 Federal Register 33207 (July 30, 1982) (40 CFR 763.60).

[7] Pub. L. 100-577. To implement the law, EPA published a notice on April 18, 1989 (54 FR 15622) establishing a process and schedule for reporting information required by the Act. In a subsequent notice, the Agency informed submitters that it would not accept CBI claims. 54 Federal Register 38736 (Sept, 20. 1989).

[8] 55 Federal Register 5144.

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The Center for Environmental Health (CEH) is an American non-profit organization organization working to protect children and families from harmful chemicals in air, food, water and in everyday products. Its vision and mission are a world where everyone lives, works, learns and plays in a healthy environment; we protect people from toxic chemicals by working with communities, businesses, and the government to demand and support business practices that are safe for human health and the environment. CEH is headquartered in Oakland, California in the United States, with an East Coast office in New York City.

For 16 years, the Environmental Health Strategy Center (EHSC) has worked to ensure that all families are healthy and thriving in a fair and healthy economy. We work for safe food and water, toxic-free products, and good green jobs. We run effective issue campaigns and advocate science-based solutions that advance a bold vision with pragmatism. A coalition builder, the Center develops grassroots leaders and champions for environmental public health and sustainable economic development. We work in Maine and nationally.

The Environmental Working Group (EWG) is a non-profit, non-partisan organization that works to empower people to live healthier lives in a healthier environment. EWG does this by creating and sharing research reports and consumer guides that help people educate themselves about the products they use. EWG also engages with policy-makers at the state and federal levels to advocate for the strengthening and enforcement of laws related to environmental health. EWG has been deeply involved in efforts to reform TSCA over the last decade and has been actively involved in implementation of the Frank Lautenberg Chemical Safety for the Twenty First Century, including the rules and actions related to asbestos.

Safer Chemicals, Healthy Families (SCHF) fights for strong chemical policy, works with retailers to phase out hazardous chemicals and transform the marketplace, and educates the public about ways to protect our families from toxic chemicals. SCHF leads a coalition of 450 organizations and businesses united by our common concern about toxic chemicals in our homes, places of work, and products we use every day.

DANGERS OF ASBESTOS EXPOSURE

The International Agency for Research on Cancer (IARC),[9] the National Toxicology Program (NTP),[10] the Occupational Safety and Health Administration (OSHA),[11] the National Institute for

[9] "IARC Monographs—Arsenic, Metals, Fibres, and Dusts, Volume 100 C. A Reviews of Human Carcinogens," in "IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. International Agency for Research on Cancer, World Health Organization.," International Agency for Research on Cancer2012, Available: http://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C.pdf.
[10] National Toxicology Program (NTP). Asbestos. Report on Carcinogens, Fourteenth Edition. US DHHS, 2016.
[11] Occupational Safety and Health Administration (OSHA). Occupational exposure to asbestos. Final rule. 29 CFR Parts 1910, et al. Federal Register, August 10, 1994.

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Occupational Safety and Health (NIOSH),[12] the World Health Organization (WHO)[13] and a number of other regulatory and public health bodies recognized asbestos as a human carcinogen decades ago. In its most recent monograph on asbestos published in 2012, IARC found the following cancers in humans to be causally related to asbestos exposure: lung cancer, malignant mesothelioma, ovarian cancer, and cancer of the larynx.[14] There is considerable evidence in the scientific literature of causal associations with gastro-intestinal cancers and kidney cancer. Non-malignant diseases are also caused by asbestos. These include asbestosis and asbestos-related pleural thickening.[15] All fiber types in commercial use have been linked causally with each of these diseases and are regulated accordingly by OSHA and other government agencies.

Despite the voluntary elimination of many asbestos products, the death toll from asbestos exposure remains alarmingly high and is increasing. At the 14th Annual Asbestos Disease Awareness Conference in Washington D.C. this year, Dr. Jukka Takala DSc, MSc, BSC, President of the International Commission of Occupational Health (ICOH), reported a shocking increase in previous estimates of asbestos-related deaths, underscoring the escalating and critical need for action by EPA. According to Dr. Takala's recently published research, asbestos-related diseases cause 39,275 deaths in the United States annually - more than double the previous estimates of 15,000 per year.[16]

A 2013 study by NIOSH of firefighters in three cities added evidence to the link between asbestos and malignant mesothelioma, finding that "[t]he population of firefighters in the study had a rate of mesothelioma two times greater than the rate in the U.S. population as a whole" and that "it was likely that the[se] findings were associated with exposure to asbestos, a known cause of mesothelioma."[17]

There is overwhelming consensus in the scientific community that there is no safe level of exposure to asbestos. Thus, as noted by the World Health Organization:

> Bearing in mind that there is no evidence for a threshold for the carcinogenic effect of asbestos, including chrysotile, and that increased cancer risks have been observed in populations exposed to very low levels, the most efficient way to eliminate asbestos-related diseases is to stop using all types of asbestos.[18]

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[12] National Institute for Occupational Safety and Health (NIOSH). Asbestos fibers and other elongate mineral particles: state of the science and roadmap for research. Current Intelligence Bulletin 62. US DHHS, 2011.

[13] WHO. International Agency for Research on Cancer (IARC) Monograph. Asbestos (chrysotile, amosite, crocidolite, tremolite, actinolite, and anthophyllite). Vol 100C, 2012.

[14] "Elimination of asbestos-related diseases," World Health Organization Geneva2014, Available: http://www.who.int/ipcs/assessment/public_health/Elimination_asbestosrelated_diseases_EN.pdf?ua=1.

[15] Dr. L. Christine Oliver, The Threat to Health Posed By Asbestos in the 21st Century In the United States, March 29, 2018, EPA-HQ-OPPT-2016-0736-0124

[16] See note 1.

[17] Daniels RD, Kubale TL, Yiin JH, *et al* Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago and Philadelphia (1950–2009) *Occup Environ Med* 2014;**71**:388-397.

[18] "Chrysotile Asbestos," ed: World Health Organization, 2015.

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Because of the absence of any safe level of exposure to asbestos, a ban on all asbestos use is the only effective way to protect the public. Many nations around the world have taken this step, including all of the members of the European Union. However, the U.S. is a laggard among industrialized nations in lacking virtually any legal prohibition on the mining, importation, use and disposal of asbestos.

ASSESSMENT AND REGULATION OF ASBESTOS UNDER TSCA

In the late 1980s, EPA was on a path to impose comprehensive restrictions on asbestos. In 1989, the Agency issued a rule under section 6(a) of TSCA prohibiting manufacture, importation, processing or distribution in commerce of asbestos in almost all products based on a determination that asbestos presented an "unreasonable risk of injury" under TSCA section 6.[19] However, despite the comprehensive risk analysis supporting the rule, the Fifth Circuit Court of Appeals overturned the ban in 1991 for reasons unrelated to the dangers of asbestos.[20] The court decision later became the poster child for the inability of TSCA to support meaningful action on widespread and unsafe chemicals. As a result, Congress enacted the 2016 Frank R. Lautenberg Chemical Safety for the 21st Century Act (LCSA), strengthening the law's provisions for chemical risk evaluation and regulation.

In December 2016, shortly after the passage of the LCSA, EPA selected ten chemicals for initial risk evaluations. Asbestos was among these 10 substances.[21] Designation of asbestos as an early priority under the amended law was essential because (1) its lethal danger to public health is well-known and abundantly documented, (2) use, mining and importation of asbestos is legal under U.S. law with limited exceptions, and (3) the present and future risk from exposure to asbestos presents grave public health concerns.

LACK OF SUFFICIENT INFORMATION ON IMPORTATION AND USE OF ASBESTOS TO SUPPORT AN INFORMED TSCA RISK EVALUATION

EPA's June 2017 scoping document[22] and June 2018 problem formulation[23] define the products and exposure pathways that EPA intends to address in its asbestos risk evaluation. These

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[19] See note 2.

[20] *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201 (5th Cir. 1991).

[21] See note 3.

[22] EPA, Scope of the Risk Evaluation for Asbestos, June 2017 https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0736-0086

[23] EPA. Problem Formulation of the Risk Evaluation for Asbestos, May 2018, https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0736-0131

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documents limit the evaluation to uses of asbestos products currently in commerce.[24] According to the problem formulation,[25] the Agency has identified the following such products:

Table 2-3. Categories of Conditions of Use Included in the Scope of the Risk Evaluation

Activity	Product Category	Example
Known, Intended, or Reasonably Foreseen Use	Asbestos Diaphragms	Chlor-alkali Industry
	Sheet Gaskets	Chemical Manufacturing
	Oilfield Brake Blocks	Oil Industry
	Aftermarket Automotive Brakes/Linings	Passenger Vehicles
	Other Vehicle Friction Products	Non-passenger Vehicles
	Asbestos Cement Products	Cement pipe
	Other Gaskets and Packing	Equipment Seals
	Woven Products	Imported Textiles

However, with limited exceptions, the problem formulation provides virtually no information about the quantities of asbestos contained in these products, the volumes in which they are produced or imported, the sites where they are used and the number of exposed individuals.

For example, the problem formulation indicates that EPA identified one company that imports asbestos-containing brake blocks for oil field use, but fails to quantify the amount of these imports or how and where they are used and acknowledges that "[i] is unclear how widespread the continued use of asbestos brake blocks is for use in oilfield equipment."[26]

Similarly, the problem formulation identifies a chemical manufacturer, Chemours, which uses imported sheet gaskets containing 80 percent asbestos but does not address how many other manufacturers use these gaskets, the aggregate amount of asbestos they contain, and the conditions of use that may result in release of and exposure to asbestos fibers.[27]

The problem formulation also cites USGS experts who, based on import records, believe that "asbestos-containing products that continue to be imported include . . . asbestos brake linings (automotive brakes/linings, other vehicle friction products), knitted fabrics (woven products), asbestos rubber sheets (i.e., sheet gaskets) and asbestos cement products." However, no information is provided on who is importing these products, what quantities are imported, where

[24] Thus, EPA will not address the risks of ongoing use and disposal of legacy products as well as the future reintroduction of these products into commerce. It has also excluded releases of asbestos into the environment. Petitioners strongly oppose these exclusions, which have the effect of placing important pathways of exposure and risk beyond the purview of the evaluation.
[25] Problem Formulation, at 22.
[26] Problem Formulation, at 25.
[27] Id.

they are distributed and how they are used. As EPA acknowledges, "[i]t is important to note that the import volume of products containing asbestos is not known." [28]

EPA recognizes that consumer exposure could occur from "changing asbestos-containing brakes or brake linings or cutting or using asbestos-containing woven products, and handling of asbestos waste that may result from these activities." However, it then acknowledges that "[c]onsumer exposures will be difficult to evaluate since the quantities of these products that still might be imported into the United States is not known."[29]

The problem formulation also determines that certain asbestos uses that EPA identified in its 2017 scoping document are not ongoing and will be excluded from the risk evaluation. But the basis for these exclusions is at best anecdotal. For example, EPA states that it "had originally identified an asbestos-containing adhesive for use as a mirror adhesive but later determined after contacting the supplier that it is no longer sold."[30] The comment of a single supplier does not mean that there are no other suppliers manufacturing or selling the adhesive. In the absence of reliable, industry-wide information, EPA may thus be erroneously excluding ongoing uses it previously identified or – even worse – failing to identify some ongoing asbestos uses altogether.[31]

In March 2018, United States Public Interest Research Group (U.S. PIRG), a group well-known as an advocate for the public interest, released a report on new studies showing asbestos contamination in Claire's makeup products sold nationally.[32] U.S. PIRG decided to investigate independently after media reports in 2017 claimed that some of children's make-up contain asbestos. Using STAT Analysis Corporation, an independent laboratory that is accredited for asbestos testing, PIRG tested over a dozen makeup products from a variety of stores. They found three products containing asbestos (tremolite), all of which are sold by Claire's.

The discovery of asbestos in Claire's makeup products – and previous detection of asbestos in certain crayons[33] -- raises the possibility that thousands of asbestos-containing products may be imported in the U.S. for sale to consumers. However, no information about these products is provided in the problem formulation – presumably because EPA lacks reliable data on their importation and use.

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[28] Id at 22.

[29] Id at 39.

[30] Id at 19.

[31] For example, a search of import data-bases for shipments arriving in the Seattle and Tacoma ports over the last few years identified imports of asbestos-containing wallboard and floor tiles. The problem formulation does not identify these products as in use in the US although it asserts, without explanation or backup, that some asbestos products listed in import data-bases "are likely misreported." Id. at 26.

[32] D. Gowda and K. Cook-Schultz, "Asbestos Found in Claire's Kids Makeup," U.S. PIRG2018, Available: https://uspirg.org/news/usf/asbestos-found-claire%E2%80%99s-kids-makeup,

[33] KMBC News, *Playskool brand crayons sold at Dollar Tree, Amazon found to contain traces of asbestos,* August 7, 2018, *https://www.kmbc.com/article/playskool-brand-crayons-sold-at-dollar-tree-amazon-found-to-contain-traces-of-asbestos/22667282*

In sum, there are serious questions about whether EPA has identified the full universe of current asbestos-containing products – and whether it has sufficient information about those products it is aware of to inform the public of the extent of asbestos exposure and conduct a meaningful evaluation of potential risks.

GOALS AND SCOPE OF CDR REPORTING

EPA has broad authority under TSCA section 8(a)(1) to require manufacturers and processors of chemical substances to submit such reports as the "Administrator may reasonably require." Promulgated in 2011, the CDR rule implements these reporting provisions The rule was intended to support EPA's risk assessment and reduction efforts by providing basic information about the manufacturing, use and exposure profiles of chemicals in commerce. As the Agency explained in 2011, the new reporting requirements --

> will enhance the capabilities of the Agency to ensure risk management actions are taken on chemical substances which may pose the greatest concern. More in-depth reporting of the processing and use data, more careful consideration of the need for confidentiality claims, and adjustments to the specific data elements are important aspects of this action. By enhancing the data supplied to the Agency, EPA expects to more effectively and expeditiously identify and address potential risks posed by chemical substances and provide improved access and information to the public.

76 Federal Register 50818, 30819 (Aug. 16, 2011). Under the rule, reporting is required for all chemicals manufactured or imported at a site in amounts of 25,000 pounds or more in a given reporting year. For chemicals already regulated under certain TSCA provisions, the reporting threshold is set at 2,500 pounds per reporting year. Reports must be filed using what the Agency calls a "Form U." Manufacturers and importers subject to the CDR must submit these forms to the Agency every four years. The latest reporting cycle was completed in the fall of 2016; the application of reporting requirements was based on activities conducted in calendar years 2012-2015, and 2015 was the principal reporting year. The next reporting cycle will end in the fall of 2020.

Under the rule, a Form U must be filed for each manufacture or import site and include import/manufacture volume for each of the last four years, the number of workers exposed and basic information about site operations. It must also include information about industrial, commercial and consumer uses of the substance at other sites and the potential for exposure associated with these downstream activities.

In expanding the scope of reporting to capture these data elements, EPA emphasized that this "exposure information is an essential part of developing risk evaluations and, based on its experience in using this information, the Agency believes that collecting this exposure information is critical to its mission of characterizing exposure, identifying potential risks, and noting uncertainties for [reportable] chemical substances." 76 Federal Register 50823.

EXCLUSION OF ASBESTOS FROM CDR REPORTING

In May of 2017, ADAO and other groups notified EPA that Occidental Chemical Corporation, one of 3 US companies who use "asbestos diaphragm cells" in the chlor-alkali process for manufacturing chlorine and other products such as caustic soda, had failed to report its asbestos imports (totaling several hundred tons) for the 2016 CDR update.[34] Instead of seeking the company's compliance with the CDR, EPA advised Occidental in a letter dated July 28, 2017 that asbestos imports were not subject to reporting because, under 40 C.F.R, §711.6(a)(3), reporting is not required for "naturally occurring chemical substances."[35]

EPA's interpretation of the CDR rule means that no manufacturers or importers of asbestos or asbestos-containing products were required to report on their activities. Accordingly, the rule has played no role in informing EPA about asbestos uses that could be addressed in the Agency's TSCA risk evaluation. This loophole in the rule has resulted in a troubling – and wholly avoidable – lack of reliable information about who is importing asbestos and in what quantities, where and how asbestos is being used in the U.S., and who is being exposed and how that exposure is occurring.[36]

CLOSING THE CDR LOOPHOLE: HOW THE RULE SHOULD BE AMENDED

This petition asks that EPA eliminate the asbestos loophole in the CDR rule so that asbestos is subject to CDR reporting. We request that EPA amend 40 C.F.R. §711.6(a)(3) so that the exemption for naturally occurring chemical substances is inapplicable to asbestos. This can be accomplished by rewording the first sentence of this exemption so it covers "[a]ny naturally occurring chemical substance, as described in 40 CFR 710.4(b), *except for asbestos*."[37]

Because EPA's asbestos risk evaluation is ongoing, the rule revision adding asbestos to the CDR rule should trigger immediate reporting on asbestos for the 2012-2016 reporting cycle. For this

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[34] As EPA noted in the problem formulation, the other two chlor-alkali producers using asbestos diaphragm cells, Axiall Corp. and Olin Corp., did report their asbestos imports under the CDR rule. Problem formulation at 21. According to the problem formulation, these were the only companies reporting on asbestos under the rule. While USGS has estimated how much raw asbestos is being imported for use in chlor-alkali production using customs records, full CDR reporting would assure more reliable import volume data and enable a precise breakdown of imports by producer. It would also clarify whether raw asbestos is also being imported into the U.S, for other purposes.

[35] This letter is attached.

[36] While this petition is focused on asbestos, the petitioners are generally troubled by the exemption of naturally occurring chemical substances from CDR reporting. This exemption could apply to lead, cadmium, mercury and arsenic, all of which are known to be highly toxic, and are candidates for risk evaluation and regulation under TSCA. CDR reporting on these substances would provide valuable information that could inform EPA's efforts under TSCA and help the public understand sources of exposure and risk. We recommend that EPA delete the exemption from the CDR rule in its next revision of CDR provisions.

[37] Although we are asking EPA amend the CDR rule, a number of the petitioners previously argued that, as a chemical regulated under section 6, asbestos was subject to reporting notwithstanding its possible classification as a naturally occurring substance. We are not waiving this position and reserve the right to challenge EPA's interpretation of CDR requirements as applied to asbestos.

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purpose, 40 C.F.R. § 711.20 should be amended to include the following sentence: "For asbestos, the 2016 CDR submission period is from January 1, 2019 to April 31, 2019."[38] This will make it possible for EPA to review and analyze the reports submitted while the risk evaluation is underway and to revise the draft evaluation on the basis of new information reported on asbestos importation and use. To assure that it has time to consider the CDR reports, EPA should extend the completion date for the asbestos risk evaluation by six months under section 6(b)(4)(G)(ii).

The rule revisions should also modify the application of reporting requirements to asbestos so that EPA obtains the comprehensive information on asbestos importation and use it needs for its ongoing risk evaluation. We request the following modifications:

1. As a substance regulated under TSCA section 6, asbestos would be subject to a reporting threshold of 2,500 pounds (1,134 kg) in any year in the reporting period under 40 C.F.R. § 711.8(b). This threshold is too high in view of the absence of any safe level of exposure to asbestos and the need for comprehensive use and exposure information for the ongoing risk evaluation. We request that the reporting threshold for asbestos be lowered to 10 pounds for any year in the reporting period.

2. 40 C.F.R. § 711.10(b) exempts from reporting persons who import a reportable substance as part of an article. Since a large number of the asbestos-containing products historically in use are articles, this exemption would prevent EPA from obtaining a considerable amount of useful information about asbestos use and exposure in the U.S. EPA should revise the article exemption in § 711.10 so it is inapplicable to asbestos. Reporting should be required for all imported articles in which asbestos is present at detectable levels.

3. 40 C.F.R. § 711.10(c) exempts from CDR reporting activities described in 40 C.F.R. §720.30(g) and (h). Among these activities are manufacture or import of a substance as an impurity ((h)(1)) or as a byproduct which is not used for commercial purposes ((h)(2)).These exemptions should be inapplicable to asbestos since the low levels of asbestos that have been found in makeup and crayons may be unintended contaminants that comprise byproducts and impurities. EPA needs information about asbestos-contaminated consumer products to conduct a complete and protective risk evaluation.

4. Currently, processors are not subject to CDR requirements. However, we request that EPA require CDR reporting by processors of asbestos-containing products. In many cases, importers will be unable to provide the detailed information about use and exposure necessary for full understanding of the risks posed by these products. Therefore, the additional information available to processors will be essential. EPA should thus add a paragraph to 40 C.F.R. § 711.8 designating processors of asbestos and asbestos-containing articles as persons required to submit CDR reports.

[38] This reporting schedule assumes that EPA promulgates revisions to the CDR rule by December 31, 2018. While this is an ambitious schedule, it should be workable given the surgical nature of the rule changes.

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TRANSPARENCY AND PUBLIC DISCLOSURE OF REPORTED INFORMATION

The information to be reported under the requested amendments to the CDR rule will be invaluable not only to EPA risk and exposure assessors but to workers and members of the general public. Knowledge of which entities are importing and using asbestos, where and how these activities occur and the quantities of asbestos involved is critical to identifying exposed populations and pathways of exposure and taking steps to reduce risks. In amending the CDR rule, EPA should therefore commit to making all reports submitted on asbestos publicly available notwithstanding any claims that these reports contain CBI.

TSCA section 14 provides two bases for overriding CBI claims in the interest of transparency and public disclosure. First, section 14(d)(3) provides that CBI protections will not apply if the Agency "determines that disclosure is necessary to protect health or the environment against an unreasonable risk of injury." Given the significant risk of harm that asbestos presents at any level of exposure, knowledge of how, where and in what quantities asbestos and asbestos-containing products are being imported and used is clearly necessary to protect against unreasonable risks and EPA would have an ample basis to make a determination to that effect. Second, section 14(d)(7) authorizes disclosure of CBI where EPA "determines that disclosure is relevant in a proceeding under this Act." The ongoing asbestos risk evaluation is such a "proceeding" and information on asbestos importation and use is clearly "relevant" because it has a direct bearing on EPA's determinations of exposure and risk and the ability of the public to comment on these elements of the risk evaluation.

EPA's CDR revisions should invoke both of these provisions and include a mechanism for promptly disclosing all reports on asbestos and asbestos-containing products.

CONCLUSION

For the above reasons, EPA should grant this petition and promptly initiate rulemaking under section 8(a) of TSCA to add asbestos to the CDR rule. As modified, the CDR rule should immediately trigger reporting on asbestos for the 2012-2016 reporting cycle, lower the reporting threshold to 10 pounds, and broaden the scope of reporting to include imported articles, asbestos-contaminated products and processors. EPA's CDR revisions should include a mechanism for promptly disclosing all reports on asbestos to the public.

We stand ready to work with you and your staff as you review the petition and determine whether to take the steps that the petition requests.

Please contact ADAO counsel, Bob Sussman, with any questions about this petition. He can be reached at:

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 28 2017

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Rebecca J. Rentz, Esquire
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Occidental Petroleum Corporation
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Dear Ms. Rentz:

This is in response to your request for clarification whether EPA's Chemical Data Reporting (CDR) rule required Occidental Chemical Corporation ("Occidental") to report imports of asbestos that occurred during the reporting period for the 2016 CDR. For the reasons described below, based on the information available to EPA, EPA believes that these imports were not required to be reported under CDR.

Asbestos is a chemical substance that is the subject of a rule promulgated under TSCA section 6.[1] Section 6 regulatory status can affect, in some respects, how CDR requirements apply to a chemical substance. For example, the reporting threshold for a section 6-regulated chemical substance is 2,500 lbs. rather than 25,000 lbs.[2] The pertinent question here, however, is whether the naturally occurring chemical substance (NOCS) exemption applied to the asbestos that Occidental imported. If the NOCS exemption applies, then the reporting threshold is irrelevant. This is reflected in the *2016 Instructions for TSCA Chemical Data Reporting ("2016 Instructions")*, page 2-2.[3]

The availability of the NOCS exemption is not affected by asbestos' regulatory status. This is clear from 40 CFR 711.6, which lists the types of CDR reporting exemptions that *are* eliminated once a chemical becomes subject to regulation under TSCA section 6. The NOCS exemption is omitted from that list. This is also reflected in the *2016 Instructions* (affirmatively noting, on page 2-12, that the NOCS exemption is not among the exemptions that are eliminated when a chemical substance has a special regulatory status).

The NOCS exemption is based on the definition of a "naturally occurring chemical substance" at 40 CFR 710.4(b). To qualify, a chemical substance must be unprocessed, processed only as described in 40 CFR 710.4(b)(1)(ii), or extracted from air. The CDR regulations make clear that these limitations are

[1] 40 CFR Part 763.
[2] 40 CFR 711.8(b).
[3] The *2016 Instructions* are publicly available at https://www.epa.gov/sites/production/files/2016-05/documents/instructions_for_reporting_2016_tsca_cdr_13may2016.pdf

intended to distinguish between a chemical substance that was manufactured "as described in 40 CFR 710.4(b)" and a chemical substance that was manufactured by other means.[4]

The pertinent manufacturing here is the import of the asbestos (TSCA itself defines import as manufacturing).[5] Occidental has represented that, prior to the point of import, the asbestos had only been processed by mechanical and gravitational means, which are within the scope of 40 CFR 710.4(b)(1)(ii).[6] Assuming this is correct, the asbestos was manufactured as described in 40 CFR 710.4(b). Under these circumstances, the NOCS exemption applied and the import was exempt from CDR reporting. This would be a scenario as described in the *2016 Instructions* at 2-12 ("a naturally occurring chemical substance remains naturally occurring when it is imported").

EPA understands that Occidental produced certain articles known as "asbestos diaphragms" using the imported asbestos. Post-import activities are irrelevant to whether the imports themselves were entitled to the NOCS exemption. The NOCS exemption for the imports is not contingent on Occidental thereafter limiting its processing of the imported chemicals to the activities described in 40 CFR 710.4(b). The CDR regulations make clear that the relevant issue for determining whether the asbestos import qualified for the exemption is whether the substance was within the scope of the NOCS exemption *when imported*.[7] Post-import activities associated with the imported asbestos would need to be separately evaluated for reportability under CDR.

Sincerely,

Jeffery T. Morris, Ph.D.
Director
Office of Pollution Prevention and Toxics

cc:
Lynn L. Bergeson, Bergeson & Campbell, P.C.
Kevin Mclean, USEPA OGC
Greg Sullivan, USEPA OECA

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[4] 40 CFR 711.6.
[5] TSCA § 3(9)
[6] *Presentation to EPA: Naturally Occurring Chemical Substances Exemption CDR* at, July 11, 2017, p. 6.
[7] At 40 CFR 711.6, the CDR regulation draws a distinction based on how the chemical substance was manufactured (including imported): either "as described in 40 CFR 710.4(b)" or "by means other than those described in 40 CFR 710.4(b))." Similarly, the *2016 Instructions* clarify that the pertinent processing is that which describes "the means by which [minerals and certain agricultural products] are produced or isolated." The asbestos at issue here was manufactured when it was imported. The means by which the asbestos was manufactured are described by the processing leading up to the point of import.

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 3/5/2019 11:12:05 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]
CC: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Bolen, Derrick [bolen.derrick@epa.gov]
Subject: FW: Keynote Address for Global Chem + Background Q&As on New and Existing Chemicals
Attachments: Dunn Keynote.GlobalChem.Mar 7 2019.V4.16pt.clean.docx; Background TSCA New Chemical QA's for Global Chem.fin.docx; Background TSCA Existing Chemicals Q&A for GlobalChem.fin.docx

Alex,
Adding the suggested background Q&As for you to have for GlobalChem. Please let us know of any questions.
M

From: Hanley, Mary
Sent: Tuesday, March 05, 2019 5:55 PM
To: Alexandra Dunn (dunn.alexandra@epa.gov) <dunn.alexandra@epa.gov>
Cc: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Erik Baptist (baptist.erik@epa.gov) <baptist.erik@epa.gov>; Derrick Bolen (bolen.derrick@epa.gov) <bolen.derrick@epa.gov>; Kaitlin Keller (keller.kaitlin@epa.gov) <keller.kaitlin@epa.gov>
Subject: Keynote Address for Global Chem

Hi Alex. Attached is the draft I handed to you today. As noted, this updates the TRI statement pulling from today's press release. Also, Hayley and her team are considering whether it would be appropriate for you to announce the PV29 peer review meeting – depending, there may be some revisions to those points tomorrow. Thanks.
M

Q&A on Existing Chemicals

What is the status of prioritizing the next round of chemicals for risk evaluation?

- By December 22, 2019, EPA must designate 20 high-priority chemicals for ongoing risk evaluations and 20 low-priority chemicals.
- The Prioritization process must take between 9 and 12 months, to reach the December 2019 deadline. EPA is still on track to initiate prioritization for these 40 chemicals before March 22, 2019.

What is the status of the first ten risk evaluations?

- In November, we issued the first draft risk evaluation for Pigment Violet-29. We intend to issue the other 9 draft risk evaluations this year—marking an important step to get the first 10 risk evaluations over the finish line.

How is the Agency addressing transparency concerns relating to PV-29?

- Following the procedures set forth in EPA's general CBI regulations, the Agency is currently undergoing the process to make a determination on whether the PV-29 studies used in the draft risk evaluation are entitled to confidential treatment. Upon competition of the CBI substantiation process, the Agency may be able to release additional information and studies.
- The Agency is committed to transparency and the public review and comment process while, at the same time, assuring adequate protection for properly substantiated CBI.

Lead

What is the status of the dust-lead hazard standard rule?

- Addressing childhood lead exposure is a priority for EPA. As part of EPA's efforts to reduce childhood lead exposure, EPA proposed a rule to revise the current dust-lead hazard standards.
- EPA intends to finalize the proposed revisions to the dust lead hazard standards by June 2019.

What about dust lead clearance levels?

- Although last year's proposed lead rule did not address clearance levels, EPA intends to review and, if necessary, revise the clearance levels at a later date.

Asbestos

Why isn't EPA considering legacy uses in the asbestos risk evaluation?

- EPA is focusing its risk evaluation on asbestos currently manufactured, imported, processed

or distributed in the United States, which falls within the agency's TSCA jurisdiction. Many existing Federal and State regulations protect against asbestos exposure from legacy uses.

What will the asbestos SNUR accomplish?

- EPA's proposed Significant New Use Rule would immediately prohibit certain unregulated uses of asbestos and require a review from EPA which may result in restrictions, including continued prohibition.
- We received a comments on the proposed SNUR requesting EPA to broaden the scope of the rule. We are giving serious consideration to this expansion as well as other comments on the SNUR.
- Without this SNUR, these uses can commence in the United States at any time without review and regulation from EPA.

Section 6 Rules

What is EPA doing about methylene chloride?

- EPA plans to issue a final determination for the use of methylene chloride in paint and coating removal shortly.
- EPA will address the non-painting and coating uses for methylene chloride in the agency's pending risk evaluation.
- [if asked: OMB has an Advanced Notice of Proposed Rulemaking on Commercial Paint and Coating Removal Training, Certification and Limited Access at OMB undergoing review. After review is complete, we will look forward to discussing the details with the public.]

What about the other Section 6 rules on TCE and NMP?

- EPA is evaluating identified uses of trichloroethylene (TCE) and N-methylpyrrolidone (NMP) as part of the first ten chemicals undergoing chemical risk evaluations under amended TSCA. Draft risk evaluations will be released for public comment and peer review before finalization. EPA is striving to meet its statutory deadlines.
- For TCE and NMP, the health effects identified in the risk evaluation were extrapolated from animal studies and had greater uncertainty around them. The risk evaluations for these chemicals will be more robust if the conditions of use are evaluated by applying the guidance and approaches required by amended TSCA, including adoption of the transparent systematic review approaches.

Message

From: Pritchard, Eileen [Pritchard.Eileen@epa.gov]
Sent: 4/19/2019 10:30:22 AM
Subject: Administrators Weekly Report for week ending April 19, 2019
Attachments: Administrator's Weekly Report 04.19.2019.pdf; Administrator's Weekly Report 04.19.2019.docx

Good Morning, Administrator Wheeler and Colleagues,

Please see the attached report for the **Administrators Weekly Report,** which includes program offices and regional updates for the week ending April 19, 2019.

Have a nice weekend!

Eileen Pritchard
Special Assistant: Office of the Administrator
(202) 564-6578 (d)
pritchard.eileen@epa.gov

Message

From: Morris, Jeff [Morris.Jeff@epa.gov]
Sent: 9/23/2018 8:36:22 PM
To: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: Draft SNUR Piece
Attachments: SNURs Explained 23 Sept 2018.docx

Charlotte, Nancy, and Erik,

For your review and comment. Short, general audience piece.

Jeff

Message

From: Strauss, Linda [Strauss.Linda@epa.gov]
Sent: 4/15/2019 9:30:31 PM
To: Dunn, Alexandra [dunn.alexandra@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Dunton, Cheryl [Dunton.Cheryl@epa.gov]; Tyler, Tom [Tyler.Tom@epa.gov]; Altieri, Sonia [Altieri.Sonia@epa.gov]
Subject: Latest press release from OPA
Attachments: Asbestos SNUR Press Release 04 15 19 3 PM_AD_CB.docx

Message

From: Weiner, Janet [Weiner.Janet@epa.gov]
Sent: 8/16/2018 9:54:01 PM
To: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Layne, Arnold [Layne.Arnold@epa.gov]
Subject: Due to GAO 8/17 -- OPPT comments on GAO's Statement of Facts for asbestos in federal buildings (102601)
Attachments: OCSPP comments_SOF_Asbestos in Fed Bldgs_ID102601_OPPT Dft_081618.DOCX

Flag: Follow up

Charlotte/Nancy/Erik;
Attached please find OCSPP's comments on this brief GAO Statement of Facts. There are no recommendations for EPA -- but OPPT/NPCD did find several corrections that needed to be made. GAO has requested our comments by 8/17. I'm out of the office tomorrow, but I will watch my email for your concurrence. Ordinarily, technical comments on a Statement of Facts would not go through DAA review, but given that asbestos is in the news lately I wanted you to have an opportunity to review this document.
Thank you,
Janet

Janet LaFiandra Weiner, Esq.
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency

Phone: (202) 564-2309
Email: weiner.janet@epa.gov
Office location: Room 3111B
WJC East Building – 1201 Constitution Ave, NW

US Mail Address:
1200 Pennsylvania Avenue, NW
Mailcode 7101M
Washington, DC 20460

From: Blair, Susanna
Sent: Thursday, August 16, 2018 4:22 PM
To: Weiner, Janet <Weiner.Janet@epa.gov>; Latham, John <Latham.John@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>
Cc: Morris, Jeff <Morris.Jeff@epa.gov>; Henry, Tala <Henry.Tala@epa.gov>; Hartman, Mark <Hartman.Mark@epa.gov>
Subject: RE: Due 8/15 -- For OPPT review: EPA Statement of Facts for asbestos in federal buildings (102601)

Janet,

Please attached the documents with OPPT's comments. Apologies for the late submission.

Thank you,
Susanna

From: Weiner, Janet
Sent: Thursday, August 16, 2018 9:54 AM
To: Latham, John <Latham.John@epa.gov>; Blair, Susanna <Blair.Susanna@epa.gov>; Pierce, Alison

<Pierce.Alison@epa.gov>
Cc: Morris, Jeff <Morris.Jeff@epa.gov>; Henry, Tala <Henry.Tala@epa.gov>; Hartman, Mark <Hartman.Mark@epa.gov>
Subject: Re: Due 8/15 -- For OPPT review: EPA Statement of Facts for asbestos in federal buildings (102601)

OPPT, I do not have any comments from you... it was due yesterday. Please let me know ASAP. Thanks.

Janet LaFiandra Weiner, Esq.
(202) 564-2309
Weiner.janet@epa.gov

On Aug 15, 2018, at 9:45 AM, Weiner, Janet <Weiner.Janet@epa.gov> wrote:

> Just checking in... Is OPPT going to have comments on this Statement of Facts?
>
> Janet LaFiandra Weiner, Esq.
> Office of Chemical Safety and Pollution Prevention
> U.S. Environmental Protection Agency
>
> Phone: (202) 564-2309
> Email: weiner.janet@epa.gov
> Office location: Room 3111B
> WJC East Building – 1201 Constitution Ave, NW
>
> US Mail Address:
> 1200 Pennsylvania Avenue, NW
> Mailcode 7101M
> Washington, DC 20460
>
> ---
>
> **From:** Weiner, Janet
> **Sent:** Friday, August 10, 2018 5:06 PM
> **To:** Latham, John <Latham.John@epa.gov>; Blair, Susanna <Blair.Susanna@epa.gov>; Pierce, Alison <Pierce.Alison@epa.gov>
> **Cc:** Morris, Jeff <Morris.Jeff@epa.gov>; Henry, Tala <Henry.Tala@epa.gov>; Hartman, Mark <Hartman.Mark@epa.gov>
> **Subject:** Due 8/15 -- For OPPT review: EPA Statement of Facts for asbestos in federal buildings (102601)
>
> OPPT:
> Please review the attached brief Statement of Facts document. There are no recommendations for OCSPP, but it does mention EPA or TSCA in a footnote on page 1, in a chart on page 4, in another chart on page 5, and in a footnote on page 7. Please check for accuracy, etc. and get back to me by 8/15 with any comments or corrections.
> Thanks!
> Janet
>
> Janet LaFiandra Weiner, Esq.
> Office of Chemical Safety and Pollution Prevention
> U.S. Environmental Protection Agency
>
> Phone: (202) 564-2309
> Email: weiner.janet@epa.gov
> Office location: Room 3111B

WJC East Building – 1201 Constitution Ave, NW

US Mail Address:
1200 Pennsylvania Avenue, NW
Mailcode 7101M
Washington, DC 20460

From: Trent, Bobbie
Sent: Wednesday, August 08, 2018 4:22 PM
To: Vincent, Marc <Vincent.Marc@epa.gov>
Cc: Lemley, Lauren <Lemley.Lauren@epa.gov>; Hingeley, Maureen <Hingeley.Maureen@epa.gov>; Weiner, Janet <Weiner.Janet@epa.gov>; Thornton, Kecia <Thornton.Kecia@epa.gov>; Anthony, Sherri <Anthony.Sherri@epa.gov>
Subject: FW: EPA Statement of Facts for asbestos in federal buildings (102601)

Good Afternoon:

GAO has released their SOF for the engagement and have offered potential dates and times if we wish to have an exit conference. There was not a lead designation for the engagement but from looking at the questions for the entrance it looked as if OAR would be the appropriate office. Please let me know the following:

OAR are you the lead/
Can we provide comments to GAO by the requested due date of August 17, 2018
Do we want an exit conference

Thanks

Bob Trent
OCFO/OC/PTAD/MIAB
202-566-0983

From: EPA-GAO-Liaison-Team
Sent: Wednesday, August 08, 2018 4:12 PM
To: Trent, Bobbie <Trent.Bobbie@epa.gov>
Subject: FW: EPA Statement of Facts for asbestos in federal buildings (102601)

From: Snyder, Alison M
Sent: Wednesday, August 8, 2018 4:12:05 PM (UTC-05:00) Eastern Time (US & Canada)
To: Howard, MarkT
Cc: EPA-GAO-Liaison-Team
Subject: EPA Statement of Facts for asbestos in federal buildings (102601)

Good afternoon,

Please confirm receipt.

Attached is a copy of the statement of facts (SOF) for GAO engagement 102601 on asbestos in federal buildings. Please note that this draft has not been fully reviewed within GAO, is subject to change, and must be safeguarded to prevent its improper disclosure. Moreover, this is not a draft of the full report.

This document only has the information that is relevant to EPA and associated contextual information. The purpose of the SOF is to confirm that the critical facts and key information used to formulate GAO's analyses and findings are current, correct, and complete. You will note that the information relevant to EPA is confined to the background section or used in footnotes. We would appreciate any comments on the Statement of Facts by **Friday August 17th**.

If EPA would like to hold an exit meeting to discuss this document and our work, we are available at the following times via teleconference (though this is optional):
Thursday August 16 from 9am-4pm
Friday August 17th from 9am-4pm
Monday August 20 from 9-10 am or 3-4pm

Thank you. Please let me know if you have any questions, and if EPA will be requesting an exit conference.

Kind regards,
Alison

Alison Snyder
Senior Analyst, Physical Infrastructure
U.S. Government Accountability Office
202-512-5420
www.gao.gov

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 3/15/2019 9:39:54 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: Fwd: Asbestos SNUR
Attachments: Asbestos SNUR TOC.docx; ATT00001.htm; Asbestos SNUR Workgroup Roster.docx; ATT00002.htm; Asbestos SNUR Action Information OCSPP Reveiw 3.15.19.docx; ATT00003.htm; Asbestos SNUR Action Memo OCSPP Review 3.15.19.docx; ATT00004.htm; Asbestos SNUR Communication Plan OCSPP Review 3.15.19.docx; ATT00005.htm; Asbestos SNUR Draft OCSPP Review Final Rule 3.15.19.docx; ATT00006.htm; Asbestos SNUR FRM OCSPP Review EA 3.15.19.docx; ATT00007.htm; Asbestos SNUR Response to Comments OCSPP Review 3.15.19.docx; ATT00008.htm

Hi. Package attached.

Sent from my iPhone

Begin forwarded message:

> **From:** "Blair, Susanna" <Blair.Susanna@epa.gov>
> **Date:** March 15, 2019 at 5:27:11 PM EDT
> **To:** "Hanley, Mary" <Hanley.Mary@epa.gov>
> **Cc:** "Pierce, Alison" <Pierce.Alison@epa.gov>, "Hartman, Mark" <Hartman.Mark@epa.gov>
> **Subject: Fwd: Asbestos SNUR**
>
> Hi Mary,
> Attached is the Asbestos SNUR package for OCSPP review. There are a few PGC comments left in for awareness. OGC management is also reviewing it and should be complete early next week.
> Thanks
> Susanna

Contents of this Final Significant New Use Rule Package

Federal Register Notice – Asbestos; Significant New Use Rule
EPA-HQ-OPPT-2018-0159; FRL XXXX-XX

1. Action Memorandum

2. Action Information Sheet

3. Communications Strategy
    a. Desk Statement

4. Economic Analysis

5. Workgroup Member List

6. OGC Concurrence

7. Typesetting Request

8. Docket Certification

Workgroup Member List

Asbestos; Significant New Use Rule
(Final Rule)

OAR:	Korbin Smith
OECA:	Jessica Goldstein Geraldine Gardner Mark Seltzer
OGC:	Steve Anderson
OP:	Sharon Cooperstein
ORD:	Steve Watkins
OW:	Colleen Flaherty Kathryn Gallagher Ashley Harper
OCSPP:	Lea Carmichael Robert Courtnage Tyler Lloyd Andrea Pfahles-Hutchens Louis "Gino" Scarano Bill Silagi Peter Smith

Action Information

Action: Final rule

Title: Asbestos; Significant New Use Rule

SAN: 6677; Tier Level: 3; RIN: 2070–AK45; OMB Not Significant; RCS: 18T-0126; FRL: 9978-76.

Purpose: Under the Toxic Substances Control Act (TSCA), EPA is finalizing a significant new use rule (SNUR) for asbestos as defined under the Asbestos Hazard Emergency Response Act (TSCA Title II, Section 202); the "asbestiform varieties of six fiber types: chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." The final significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for uses that are neither ongoing nor already prohibited under TSCA. The Agency has found no information indicating that the following uses of asbestos are ongoing, and therefore, the following uses are subject to the SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; cement products; extruded sealant tape and other tape; filler for acetylene cylinders; friction materials (with certain exceptions); high-grade electrical paper; millboard; missile liner; packings; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; woven products (other than brake blocks used in oilfield drawworks); any other building material; and any other use of asbestos that is neither ongoing nor already prohibited under TSCA.

Persons subject to the SNUR are required to notify EPA at least 90 days before commencing any manufacturing (including importing) or processing of asbestos (including as part of an article) for a significant new use. The required significant new use notice (SNUN) provides EPA the opportunity to evaluate the new use and, if necessary, take action to prohibit or limit the activity. Manufacturing (including importing) and processing (including as part of an article) for the significant new use may not commence until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

Background: In 2016, the Frank R. Lautenberg Chemical Safety for the 21st Century Act (Pub. L. 114-182, 130 Stat. 448) amended TSCA and included statutory requirements related to the risk evaluations of conditions of use for existing chemicals. In December of 2016, EPA designated asbestos as one of the first 10 chemical substances subject to the Agency's initial chemical risk evaluations (81 FR 91927), pursuant to TSCA section 6(b)(2)(A) (15 U.S.C. 2605(b)(2)(A)). The risk evaluation focuses on the conditions of use of asbestos: the circumstances under which asbestos is intended, known, or reasonably foreseen to be manufactured (including imported), processed, distributed in commerce, used, or disposed of in the United States. The significant new use rule for asbestos serves to compliment the risk evaluation by ensuring that any discontinued use of asbestos not otherwise prohibited (that can resume at any time) must be reviewed and approved by EPA prior to commencing.

Stakeholder Involvement: No external stakeholder involvement.

Key Issues/Internal Review: The final significant new use rule was reviewed by Agency workgroup staff including Office of General Counsel, Office of Policy, Office of Research and Development, Office of Enforcement and Compliance Assurance, Office of Air, and Office of Water.

Legal Deadline: No statutory or court-ordered deadlines apply to this action.

Timing: The final rule is intended to be published in the Federal Register on or before April 29, 2019.

Contact: Robert Courtnage (202-566-1081, [HYPERLINK "mailto:Courtnage.Robert@epa.gov"]) or Lea Carmichael (202-564-4689, [HYPERLINK "mailto:Carmichael.Lea@epa.gov"]).

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 3/5/2019 8:29:08 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: GlobalChem Background: Existing Chems Q&As
Attachments: 03.05.19 - Existing Chems Q and A v2.docx

Flag: Flag for follow up

Hi, For your review here are the draft EC Q&As for your review before I provide to Alex. Thanks.

Message

From: Dunton, Cheryl [Dunton.Cheryl@epa.gov]
Sent: 8/9/2018 12:16:54 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Strauss, Linda [Strauss.Linda@epa.gov]
Subject: RE: Asbestos web revisions needed today/ASAP
Attachments: Asbestos Web Edits New Use clean.docx

Per my talk w/ Nancy this morning, here's a clean version of the asbestos web pages impacted by the messaging we worked on yesterday. The new/revised text is in red for easy reviewing. Let me know if you have questions/comments. Nancy G./OPA called this morning to say they'd like us to get our web updated as soon as possible. Thanks.

From: Dunton, Cheryl
Sent: Wednesday, August 08, 2018 1:40 PM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>
Cc: Strauss, Linda <Strauss.Linda@epa.gov>
Subject: Asbestos web revisions needed today/ASAP

Just flagging this for you. The edits are consistent with the final language you worked on earlier. OPA would like web edits up ASAP. Nancy Grantham in OPA had me post the final asbestos factsheet on the web a few minutes ago. Thanks.

From: Dunton, Cheryl
Sent: Wednesday, August 08, 2018 11:34 AM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>
Cc: Strauss, Linda <Strauss.Linda@epa.gov>
Subject: Asbestos web revisions

Here's what we're thinking on web revisions. See track changes of the pages in question attached. This language is pulled from the factsheet language OPA pulled together so if that changes I'll change this too. Let me know if you have thoughts. Thanks.

Cheryl Dunton
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
202-564-4893

Message

From: Morris, Jeff [Morris.Jeff@epa.gov]
Sent: 9/21/2018 6:08:53 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
CC: Blair, Susanna [Blair.Susanna@epa.gov]; Mottley, Tanya [Mottley.Tanya@epa.gov]; Symmes, Brian [Symmes.Brian@epa.gov]
Subject: FW: Talking points on asbestos: NSSGA's issues
Attachments: Asbestos TPs for NSSGA Mtg.9-21-18.v2.docx

Our 1-pager for the acting Administrator's Tuesday meeting.

Contents of this Final Significant New Use Rule Package

Federal Register Notice – Asbestos; Significant New Use Rule
EPA-HQ-OPPT-2018-0159; FRL XXXX-XX

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Workgroup Member List

Asbestos; Significant New Use Rule
(Final Rule)

OAR:	Korbin Smith
OECA:	Jessica Goldstein Geraldine Gardner Mark Seltzer
OGC:	Steve Anderson
OP:	Sharon Cooperstein
ORD:	Steve Watkins
OW:	Colleen Flaherty Kathryn Gallagher Ashley Harper
OCSPP:	Lea Carmichael Robert Courtnage Tyler Lloyd Andrea Pfahles-Hutchens Louis "Gino" Scarano Bill Silagi Peter Smith

Action Information

Action: Final rule

Title: Asbestos; Significant New Use Rule

SAN: 6677; Tier Level: 3; RIN: 2070–AK45; OMB Not Significant; RCS: 18T-0126; FRL: 9978-76.

Purpose: Under the Toxic Substances Control Act (TSCA), EPA is finalizing a significant new use rule (SNUR) for asbestos as defined under the Asbestos Hazard Emergency Response Act (TSCA Title II, Section 202); the "asbestiform varieties of six fiber types: chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite or actinolite." The final significant new use of asbestos (including as part of an article) is manufacturing (including importing) or processing for uses that are neither ongoing nor already prohibited under TSCA. The Agency has found no information indicating that the following uses of asbestos are ongoing, and therefore, the following uses are subject to the SNUR: adhesives, sealants, and roof and non-roof coatings; arc chutes; beater-add gaskets; cement products; extruded sealant tape and other tape; filler for acetylene cylinders; friction materials (with certain exceptions); high-grade electrical paper; millboard; missile liner; packings; pipeline wrap; reinforced plastics; roofing felt; separators in fuel cells and batteries; vinyl-asbestos floor tile; woven products (other than brake blocks used in oilfield drawworks); any other building material; and any other use of asbestos that is neither ongoing nor already prohibited under TSCA.

Persons subject to the SNUR are required to notify EPA at least 90 days before commencing any manufacturing (including importing) or processing of asbestos (including as part of an article) for a significant new use. The required significant new use notice (SNUN) provides EPA the opportunity to evaluate the new use and, if necessary, take action to prohibit or limit the activity. Manufacturing (including importing) and processing (including as part of an article) for the significant new use may not commence until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination.

Background: In 2016, the Frank R. Lautenberg Chemical Safety for the 21st Century Act (Pub. L. 114-182, 130 Stat. 448) amended TSCA and included statutory requirements related to the risk evaluations of conditions of use for existing chemicals. In December of 2016, EPA designated asbestos as one of the first 10 chemical substances subject to the Agency's initial chemical risk evaluations (81 FR 91927), pursuant to TSCA section 6(b)(2)(A) (15 U.S.C. 2605(b)(2)(A)). The risk evaluation focuses on the conditions of use of asbestos: the circumstances under which asbestos is intended, known, or reasonably foreseen to be manufactured (including imported), processed, distributed in commerce, used, or disposed of in the United States. The significant new use rule for asbestos serves to compliment the risk evaluation by ensuring that any discontinued use of asbestos not otherwise prohibited (that can resume at any time) must be reviewed and approved by EPA prior to commencing.

Stakeholder Involvement: No external stakeholder involvement.

Key Issues/Internal Review: The final significant new use rule was reviewed by Agency workgroup staff including Office of General Counsel, Office of Policy, Office of Research and Development, Office of Enforcement and Compliance Assurance, Office of Air, and Office of Water.

Legal Deadline: No statutory or court-ordered deadlines apply to this action.

Timing: The final rule is intended to be published in the Federal Register on or before April 29, 2019.

Contact: Robert Courtnage (202-566-1081, [HYPERLINK "mailto:Courtnage.Robert@epa.gov"]) or Lea Carmichael (202-564-4689, [HYPERLINK "mailto:Carmichael.Lea@epa.gov"]).

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 7/10/2018 8:10:42 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: FW: OPPT Actions for General
Attachments: OPPT ACTION ITEMS CHART as of 07.10.18.V2.docx

Hi, use this Version 2 instead. Thanks.

From: Hanley, Mary
Sent: Tuesday, July 10, 2018 3:14 PM
To: Beck, Nancy <Beck.Nancy@epa.gov>; Bertrand, Charlotte <Bertrand.Charlotte@epa.gov>; Erik Baptist (baptist.erik@epa.gov) <baptist.erik@epa.gov>
Subject: OPPT Actions for General

Hi,
Attached please find my list of OPPT action items, etc. As always, please let me know if you would like me to add or revise anything. This will be in your folders for tomorrow.
Cheers
M

Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 6/17/2018 7:00:41 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Bolen, Derrick [bolen.derrick@epa.gov]
Subject: Fwd: Weekly Report June 11-15, 2018
Attachments: Weekly Report June 11-15-2018.pdf; ATT00001.htm; Weekly Report June 11-15-2018.docx; ATT00002.htm

Hi,
I suspect that I am now receiving this is because I am covering until Chief of Staff is selected. If this should be distributed further please do so or let me or Derrick know.
Cheers
M

Sent from my iPhone

Begin forwarded message:

> **From:** "Johnson, Laura-S" <Johnson.Laura-S@epa.gov>
> **Date:** June 15, 2018 at 3:55:47 PM EDT
> **Subject: Weekly Report June 11-15, 2018**
>
> Good afternoon,
>
> Attached is the report for the week of June 11-15, 2018.
>
> Enjoy your weekend!
>
> Sincerely,
> Laura

Laura S. Johnson | U.S. Environmental Protection Agency
Special Assistant, Office of the Administrator | Cell (202) 819-4941
Office (202) 566-1273 | johnson.laura-s@epa.gov

Region 1

Hot Topics

22nd Annual EPA and State Enforcement, Compliance, and Assistance Meeting
On June 13, the Region hosted its 22nd Annual EPA and State Meeting for Enforcement, Compliance and Assistance in Boston, MA. The event included participants representing all six New England states, DOD, NEWMOA and OECA. A major meeting focus was lean principles and lessons learned from lean initiatives.

R1 DOD Visit to Fort Devens PFAS Site
On June 15, RA Dunn, Maureen Sullivan of the Office of the Secretary of Defense and John Tesner the Director for Restoration at US Army visited the Fort Devens Superfund Site with Representatives from both Devens and Ayer to discuss responsibilities of treatment and cost of PFAS remediation.

Community Engagement throughout New England Communities
In addition to the Federal Resource Roundtable held on June 12 – detailed in last week's report – where RA Dunn and the EPA joined HUD's RA David Tille and representatives from various federal agencies, RA Dunn and Region 1 staff spent this week focusing on community-scale engagement, including:

> *Mystic River Water Quality Report Card.* On June 13, Region 1 issued our annual Mystic River Water Quality Report Card at the Tufts University Boathouse on the Malden River in Medford. The report card and presentations from a local regulated water authority, the Mayor of Medford, and Massachusetts DEP Commissioner Martin Suuberg, detailed ongoing advancement toward clean water in the Mystic.
>
> *Revitalizing the Ocean State.* On June 14, RA Dunn announced $1.3 million in Brownfields funds to help assess and cleanup contaminated properties and promote employment opportunities related to Brownfields in Rhode Island. The event included Director Janet Coit of RIDEM and local community members.
>
> *Environmental Justice Call to Action Forum.* On June 14, RA Dunn and staff engaged with local community members and activists at an Environmental Justice Call to Action Forum at the New Bedford Superfund Site. Discussions included local Environmental Justice issues, Superfund, Brownfields, Workforce Development, Urban and Rural Revitalization. New Bedford Superfund site on the RA Redevelopment priority list.
>
> *State of the Lake.* On June 15, the Lake Champlain Basin Program funded by EPA will be releasing their latest "State of the Lake," with amplification from RA Dunn, providing a look back at recent years' progress based on a host of water quality metrics, as well details of upcoming local, state, and federal efforts in to clean up this iconic waterway.

Upcoming Major Decisions and Events

Partial Approval of New Hampshire's 2016 303(d) List
In response to the state's request, EPA intends to partially approve New Hampshire's 2016 final 303(d) list, most likely by the end of next week. The Region is deferring action on some units in the Great Bay estuary while we coordinate further with our partners and continue to evaluate the science.

Region 1 Highlights Cape Cod Nutrient Challenges
On June 18, Region 1 will host a tour of EPA nutrient pollution research on Cape Cod. Attendees will include ORD, congressional staff, and media outlets that cover these issues.

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Region 2

Hot Topics

Settlement Reached with New York City Housing Authority. On 6/11, the settlement in this action by HUD and EPA was lodged with the court (SDNY). The consent decree, which now awaits the court's approval, requires the appointment of an independent monitor who will be in charge of overseeing comprehensive corrective measures by NYCHA, including with regard to lead paint. It also requires the City of New York to provide $1.2 billion of additional capital funding to NYCHA over the next 5 years, and $200 million every year thereafter until the problems are fixed and the decree is no longer necessary.

Settlement of a RCRA Administrative Enforcement Case with U.S. Army's West Point Garrison. On 6/6, an administrative Consent Agreement and Final Order was issued resolving West Point's alleged violations of NY hazardous waste rules and federal underground storage tank rules. The Garrison will pay a civil penalty of $90,000, certify that it has come into compliance at the facility with the cited rules and comply in the future with these rules. NY was consulted in advance and had no concerns.

Agreement with Westchester County (NY) to Resolve Violations of Underground Storage Tank (UST) Rules. On 6/8, an administrative Consent Agreement and Final Order was issued resolving the county's alleged violations of UST rules. The County agreed to pay a civil penalty of $90,000 and certified that the operation of the UST systems at its 13 facilities is in compliance with the UST rules.

GenX - Chemours, Deepwater, NJ. Chemours' preliminary results for GenX sampling of monitoring wells, residential wells, and manufacturing operations indicate that 8 of 11 monitoring wells had detections of GenX (Dimer Acid) ranging from 4.5 parts per trillion (ppt) to 280 ppt (the 280 ppt was found in a co-located shallow and deep well; the next highest concentration found was 67 ppt). Two of the private wells sampled had concentrations of 11 and 13 ppt prior to GAC treatment but were non-detect after treatment. Chemours is claiming the results for the manufacturing operations to be Confidential Business Information; we are asking Chemours for substantiation of the claim. Follow-up steps with Chemours were discussed during the monthly call on 6/13. Chemours also notified us that draft GenX results for the Pennsville water supply have been received and are all non-detect.

Upcoming Major Decisions and Events

San Juan Local Emergency Planning Committee to Host Region 2 for "Core TSCA" Training. At the request of regulated businesses and interested stakeholders in PR, Region 2 is providing compliance assistance training on the TSCA "New and Existing Chemicals" regulations. The training will be held 6/19-20 and is being hosted by the San Juan Local Emergency Planning Committee (LEPC). Over 60 LEPC members and invited guests are expected to attend. The training will provide a thorough overview of compliance information for manufacturers, importers, and processors of chemicals and will give attendees the opportunity to have a one-on-one question and answer session with Region 2 inspectors.

Great Lakes Restoration Initiative Action Plan III Public Engagement Session. EPA will host the second of six informal public engagement sessions on the Great Lakes Restoration Initiative (GLRI) Action Plan III in Rochester, NY on 6/21. Members of the public will be able to learn more about the Plan development process, talk with representatives from EPA and other agencies and provide input on priorities to be used in the initial stage of developing a GLRI Action Plan covering FY-2020 through 2024.

- 6/18: Senior Region 2 staff are participating in a Lake Guardian event in Rochester, NY to highlight the survey of Lake Ontario (dive and sampling missions by EPA staff).
- 6/19: RA Pete Lopez is scheduled to meet with reporters from The Bergen Record for a profile interview and to discuss several hazardous waste site cleanups in northern New Jersey.

Region 3

Hot Topics

Restoration Advisory Board Meeting at the Former Nansemond Ordnance Depot
On June 7, 2018, representatives from the Department of Defense (DOD), EPA, City of Suffolk (COS), Environmental Quality (DEQ), the Army, Army Corps of Engineers (USACE) and contractor, Board and community members and stakeholders, participated in discussions of the site and future activities. The Remedial Project Manager and Community Involvement Coordinator attended the meeting and as usual was an energetic discussion of activities timelines, and cost etc. The highlight of the discussion centered around a previous meeting and site visit attended by more than 30 high-level officials from the DOD, including the Assistant Secretary of Defense, Department of the Army, EPA, DEQ, USACE, COS, and others which resulted in increased emphasis and urgency on the cleanup and restoration activities. Approximately 30 people attended the meeting.

PA Mining to Implement NPDES Checklist
Water Protection Division staff participated in a PADEP Bureau of Mining training webinar for National Pollutant Discharge Elimination System (NPDES) mining permit writers on June 6 in Harrisburg, PA. The webinar outlined the rollout of the Pennsylvania NPDES mining checklist. The checklist was developed jointly by PADEP Bureau of Mining and Region 3 NPDES permits mining team and will guide permit writers in the permit development process. Pending PADEP final agreement, the tentative start date is July 1, 2018.

SRF Financial Training Held in Region 3
The Office of Infrastructure and Assistance hosted State Revolving Fund (SRF) financial training from June 5–7 in the regional office. Attendees included SRF staff from all regional states, HQ and Region 3. At a time when there is a renewed emphasis on infrastructure funding, the training focused on critical areas, including the grant funding process, managing cash flows, and conducting financial analysis and oversight. The training is part of EPA's continuous effort to strengthen its partnership with the states.

Wastewater Operator Training for PA Water Environment Association
On June 5-6, Walter Higgins of the Office of Infrastructure and Assistance conducted a full-day training session and two 30-minute presentations at the Pennsylvania Water Environment Association's Annual Conference in Hershey, PA. The conference is attended primarily by wastewater professionals (engineers, operators and equipment vendors). The full-day session was to prepare individuals for the Pennsylvania wastewater certification exam. The two presentations were on Asset Management and Nutrient Removal Optimization.

LCD Reviews MD and VA Lead Programs
In late May and early June, LCD met separately with the Maryland Department of the Environment (MDE) and the Virginia Department of Health (VDH), Virginia Department of Professional and Occupational Regulation (DPOR), and Virginia Department of Labor and Industry, respectively, for the end of year reviews of their Lead programs. The meetings allowed EPA to discuss Maryland's and Virginia's programs, including highlights and concerns that any of the involved parties might have. The meeting with Virginia personnel concentrated on each of the departments' function and funding issues. EPA was able to review and evaluate Virginia's progress meeting its grant commitments and accomplishing its deliverable outline within the grant award.

Region III's Small Business Program hosts multi-agency workshop
On June 13, 2018, Region 3's Small Business Program Coordinator and the Small Business Technical Advisor from GSA hosted over 100 small businesses on expanding opportunities and resources. A multi-agency panel discussion followed on the topic of how small businesses can engage the federal government. The event ended with agency breakout sessions where small businesses were invited to share their capabilities with EPA,

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GSA, SBA, USDA and Commerce. The event was well received by the attendees who committed to attend in the future. The Agencies also committed to collaborate on future efforts.

Upcoming Major Decisions and Events

Regional Administrator Cosmo Servidio has the following events scheduled:

- June 14, 2018 – Urban Stromwater Meeting, Greensburg, PA
- June 14, 2018 – Farmer Agricultural Roundtable, Ruffs Dale, PA
- June 19, 2018 – Chester Environmental Partnership Meeting, Chester, PA
- June 19, 2018 – Montgomery Brownfields Press Event, Ambler, PA

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Region 4

Hot Topics

Daicel Safety Systems (Beaver Dam, KY)
Key Message: On June 11, 2018, Region 4 Administrator Trey Glenn closed the loop on the outstanding concerns with Daicel Safety Systems with Tony Hatton, Commissioner for the Kentucky Department of Environmental Protection. The Regional Administrator conveyed the region's plan to not send additional correspondence to the state or the company related to the matter at this time.

Mississippi Phosphates Corporation (Pascagoula, MS)
Key Message: Region 4 Administrator Trey Glenn concurred on the sale of the MPC trust assets to Hilco.

Upcoming Major Decisions and Events

Decisions
Grenada – The Region's position based on the information and proposed remedy submitted by the PRP.

Events
North Carolina Compliance Assurance Meeting. On June 19, 2018, Region 4 Administrator Trey Glenn and regional senior leadership will meet with the North Carolina Department of Environmental Quality to discuss general communication with the state as well as state specific compliance concerns. Raleigh, NC. Closed Press.

Everglades Restoration Strategies Principals Meeting. On June 20, 2018, Region 4 Administrator Trey Glenn will meet with the Secretary for the Florida Department of Environmental Protection for the semi-annual meeting to discuss the status of the Everglades. Miami, FL. Closed Press.

State Commissioners' Meeting. On June 21-22, 2018, Region 4 Administrator Trey Glenn will meet with the Region 4 State Environmental Commissioners to discuss broad programmatic and regulatory concerns as well as special state projects and focus areas. Miami, FL. Closed Press.

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Region 5

Hot Topics

Office of Inspector General Flint Report Expected to be Released Week of June 25
Key Message: The Region and HQ are coordinating on developing a desk statement in preparation for the release. The agency has concurred with OIG's recommendations and provided a response on May 30, 2018.

Mayor of Flint is Refusing to Sign the State's June 6 Administrative Consent Order
Key Message: It is MDEQ policy that significant deficiencies that have not been resolved in 120 days have a formal, agreed-upon schedule in a consent order. The order formally addresses previously identified deficiencies and does not mean that no progress is being made. In press accounts this week, the mayor refers to the order as "retaliatory and punitive."

Environmental Law and Policy Center (ELPC) Filed Motion Seeking Court to Require EPA Action on Lake Erie Impairment
Key Message: The June 8 motion asks the court to require EPA to develop a phosphorous total maximum daily load (TMDL) for western Lake Erie. The ELPC claims that the impairment designation imposed on the western Lake Erie basin triggers the CWA requirement for a TMDL.

Upcoming Events/Major Decisions

EPA to Hold a Public Engagement Meeting for the Great Lakes Restoration Initiative Action Plan III in Rochester, New York
Key Message: Region 5 and Region 2 are coordinating on the June 21 event. EPA and its federal partners are in the process of developing Action Plan III, which will outline the priorities and goals for the Great Lakes Restoration Initiative for the years 2020-2024.

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Region 6

Hot Topics

Tire Fire Response, Cuba, New Mexico
On June 9, 2018, the New Mexico Environment Department (NMED) requested EPA assistance in response to a tire fire about 5.9 miles south of Cuba, NM. An estimated 80,000 tires burned over a half acre plot, with the fire still not contained. EPA conducted air monitoring on-site and at the neighboring residential properties. All results were non-detect or below site-specific action levels. The New Mexico ambient air monitoring also shows no ambient air concerns. The fire was successfully extinguished June 14, 2018 and EPA assets and resources were demobilized.

HP Cylinders Emergency Response, Baytown, Texas
EPA and TCEQ continue for the $4.2 million impaired cylinder removal action and to visit with neighboring business to discuss project scheduling. This removal action is expected to take 4-6 months to complete. EPA response contractors continue to mobilize assets and resources to Stillwater Consultants, LLC to initiate removal action of 500 abandoned cylinders of compressed gas. EPA's Emergency Response Team mobilized to assist with VIPER data management configuration.

Bird Creek, Osage County, Oklahoma
Data analysis from the in-stream monitoring network at Bird Creek is currently ongoing. Warren American and Jireh have opposed a 90 day stay and EPA answers are due by June 19th.

Texas Impaired Waters List
The public comment period for the TCEQ's 2016 list of impaired waters ended June 4, 2018. Technical issues remain between TCEQ and Region 6 regarding the assessment of certain lakes/reservoirs with site-specific chlorophyll-a criteria which do not appear to be met, yet the state has not chosen to list them as impaired.

Upcoming Major Decisions and Events

St. James Parish South Louisiana Methanol LP, Louisiana
Region 6 intends to issue a federal register notice announcing the Administrator's decision on the South Louisiana Methanol Title V Petition.

Houston 2008 Ozone Standard Volatile Organic Compound SIP and Reasonably Achievable Control Technology
Region 6 intends to propose approval of the TCEQ VOC storage tank SIP revisions and proposed approval of the state's demonstration that reasonably achievable control technology regulating NOx and VOC emissions are in place for the 2008 Ozone NAAQS in the Houston/Galveston/Brazoria non-attainment area.

Arkansas Minor NSR State Implementation Plan
Region 6 intends to take final SIP action by June 20 to raise ADEQ's minor NSR permitting and de minimis thresholds. EPA received significant public comments on the proposed SIP changes from Sierra Club and more specifically on our 110(l) analysis (anti-backsliding into nonattainment) for the action. This will address two backlog SIP actions.

Oklahoma 2016 Air Permit Program Related Annual SIP Update
Region 6 intends to propose approval of selected revisions to the Oklahoma SIP submitted in their 2016 Annual SIP Update to revise incorporation by reference dates and emission inventory reporting requirements to be consistent with federal requirements.

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CAA TAS Application, Pueblo of Zia, New Mexico

Region 6 received the Pueblo of Zia's Treatment-As-State (TAS) application under the Clean Air Act on May 29. The next step is for EPA to issue a Notification of a Complete Application letter and send notification letters to affected governors and chiefs in the area. A 30-day public comment period will begin with the notification of a complete TAS application.

June 19	Tour of Houston Ship Channel, Houston, Texas
June 20	HARC Tour and Meeting, Houston, Texas
June 20	Houston Bar Association Luncheon, Houston, Texas
June 22	Louisiana Farm Bureau Annual Convention, New Orleans, Louisiana
June 22	LMOGA Refinery Managers Meeting, New Orleans, Louisiana

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Region 7

Hot Topics

West Lake Landfill (Bridgeton, MO)

Key Message: This week EPA Region 7 oversaw the installation of a non-combustible cover over portions of the West Lake site, conducted coordination efforts with the state and CAG, and continued to prepare the ROD amendment.

- On Monday June 11, EPA oversaw the installation of the non-combustible cover over two areas in the OU-1 Area 2 of the site. The work is estimated to take 40 days to complete and is required by an enforcement order for surface fire and migration mitigation where radiologically impacted material is present at the ground surface.
- The region hosted a call with the Missouri Department of Natural Resources to discuss the Technical Community Advisory Group's request to discuss air monitoring activities and data at the site. MDNR has agreed to jointly participate in the discussion with the TCAG and the region is now working to schedule the meeting.
- Efforts to prepare the Record of Decision Amendment and respond to comments for inclusion in the Responsiveness Summary are ongoing.

Cleburn Thermal Site Visit (Grand Island, NE)

Key Message: EPA Region 7 launched a thermal treatment system at the Cleburn Street Well Superfund site and conducted a related site tour open to stakeholders and local media.

- On June 12, a site tour was conducted on the thermal remedial action at the Cleburn Street Well site. The event included a demonstration of the thermal treatment technology that EPA will use to clean up the TCE contamination at the site. EPA, the Nebraska Department of Environmental Quality, the city of Grand Island, and multiple media were present. In total, approximately 40 people attended the tour and local media interviews were conducted.

Doe Run Meeting in St. Louis

Key Message: EPA Region 7 held a coordination meeting with Doe Run to discuss Superfund sites in Southeast Missouri.

- On June 8, a meeting was held with EPA Region 7 and Doe Run to discuss Superfund site related issues in Southeast Missouri. Topics discussed included financial assurance at two sites, closeout of Doe Run work at the Federal Tailings site, transfer of remaining work at Herculaneum, remaining items from a 2011 multi-media consent decree, the value of closing out orders, concern over Big River OU2 cost, and IROD vs final ROD for river and floodplain cleanup of Big River OU2.
- Additional topics of discussion included chemical smelting technology, industry perspective on lead, recent attribution studies, and liability of other downstream parties.

Upcoming Major Decisions and Events

Shell Creek Atrazine Delisting Event

Key Message: On June 15, Regional Administrator Jim Gulliford and Water, Wetlands, and Pesticide Division Director Jeff Robichaud will attend the Shell Creek Atrazine Delisting event in Schuyler, Nebraska.

Region 8

Hot Topics

UPDATE from 5/24: PFAS Contamination at Sugarloaf Fire Protection District in Boulder County
On Monday, June 11, the Sugarloaf Fire Protection District received additional PFAS sampling results. Only one of the twelve homes nearest Fire Stations 1 and 2 tested above the EPA Health Advisories for PFOA and PFOS. Sugarloaf is coordinating with Boulder County and CDPHE to determine where additional sampling is needed to determine risk. Boulder County has funded sampling private wells to date but expects to request support from CDPHE and EPA for future testing due to the high costs per sample. Sugarloaf is holding a board meeting on Tuesday, June 19, that is open to the public. Boulder County, CDPHE, and EPA will attend to help answer any questions.

Region 8 issued two SDWA Emergency Administrative Orders to the Blackfeet Tribe
On June 7, 2018, EPA issued two EAOs in response to potential imminent and substantial endangerment at Bedrock Babb Water System (serves 60 residents) and Starr School Water System (serves 175 residents) located on the Blackfeet Indian Reservation in Montana. Both systems lost pressure when they ran out of water due to mechanical problems. Loss of pressure in a drinking water distribution system may cause back siphoning which can allow disease causing organisms to enter the distribution system. The Systems issued public notice (boil water advisory) and are in the process of performing corrective actions.

Region 8 Issued a SDWA Emergency Administrative Order (EAO) to Town of Cokeville in Lincoln County
On June 13, 2018, EPA issued an EAO in response to a potential imminent and substantial endangerment at the Town of Cokeville public water system located in Wyoming. The System, currently serving 535 residents, had an E. coli maximum contaminant exceedance. Prior to order issuance, EPA consulted with OECA, Wyoming DEQ and Department of Health. The State of Wyoming does not have primacy for the drinking water program.

Upcoming Major Decisions and Events

None

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Region 9

Hot Topics

Excelsior Mining UIC Permit: Next week, we'll make a final permit decision on Excelsior Mining's Class III UIC permit for the Gunnison Copper Project in Cochise County, Arizona. The permit will authorize a 20+ year commercial-scale copper solution mining project involving 1,400 injection and recovery wells, and numerous wells for hydraulic control, monitoring, and compliance assurance. We have worked closely with the Arizona Dept. of Environmental Quality to coordinate regulatory requirements for the project, which is also permitted by their Aquifer Protection Program.

PFOS Discussion with Guam EPA: We will meet with Guam EPA Administrator Walter Leon-Guerrero regarding roles and responsibilities for treatment of wells contaminated with perfluorooctanesulfonic acid (PFOS) located close to the former Department of Defense Naval Air Station Agana.

Audit of California's Class II UIC Program: The Ground Water Protection Council (a nonprofit whose members are state groundwater regulatory agencies) will audit the California UIC program. The GWPC routinely conducts these Class II audits for states who request it. We will participate as an observer at the request of the state and the council.

Navajo Abandoned Uranium Mines: We are using the EPA Airborne Spectral Photometric Environmental Collection Technology (ASPECT) airplane to complete radiological surveys of approximately 130 Navajo Nation abandoned mines. These surveys will help us assess where further investigations are needed. EPA's Radiological Emergency Response Team (RERT) will provide field support for in situ field correlations. There will be two community events for the public to see the ASPECT airplane on the ground, in Gallup and Tuba City.

Denial of Entry (Engine Imports): We recommended the Bureau of Customs and Border Protection (CBP) seize or export 800 bicycle engine kits imported by "Used Car Factory" through the Port of Long Beach. Based on our physical examination, Used Car Factory violated the Clean Air Act, as the engines lack a valid Certificate of Conformity and are uncertified. As this is our first recommended seizure or denial of entry for "Used Car Factory," we'll proceed with an Expedited Settlement Agreement (ESAs).

Mexican Border: RA Mike Stoker and Ken Wagner met with the Arizona Dept. of Environmental Quality and DOJ to discuss Nogales wastewater infrastructure. They also attended the Border 2020 Regional Arizona/Sonora workgroup meeting to discuss strategies to eliminate trans-boundary sewage flows.

Upcoming Major Decisions and Events

Pacific Islands Environment Directors Meeting: Next week, we will host senior managers from US-affiliated Pacific island environmental agencies for the biennial Pacific Islands Environment Directors meeting. Topics will include recycling and sustainable materials management, radon testing, information management, and leadership development. Regional Administrator Mike Stoker will provide opening comments.

Presenting PCB FAST to Chevron: On June 18, we will give a presentation to approximately 80 Chevron environmental managers worldwide on the PCB Facility Approval Streamlining Toolkit (PCB FAST), a process developed in Region 9 to speed the pace of PCB cleanups through a collaborative process. Over the past few years, we have worked with Chevron on a number of PCB cleanups. At Chevron's Birch Hills project, we used alternative remediation approaches that reduced the cost of disposal by $12.9 million, reduced CO2 emissions by over 22,000 tons, and reduced the project time by 9 months.

Region 10

Hot Topics

Naval Air Station Whidbey Island to Use CERCLA Time Critical Removal Authority for PFOA/PFOS (WA): Region 10 recently sent a letter to NAS Whidbey Island documenting our disagreement with the Navy's decision to use a CERCLA ***Time Critical*** Removal Action to attach homes with PFOA/PFOS contaminated private well water to the municipal water system for the Town of Coupeville. EPA supports doing this via a ***Non-Time Critical*** Removal Action or interim Record of Decision, both of which allow for public input on the alternatives the Navy considered. We believe this is particularly important because the landowners will no longer be able to use their private wells and will have to pay monthly water bills following the hook up to the municipal water system.

Upcoming Major Decisions and Events

Western States/British Columbia Oil Spill Task Force and Clean Pacific Conference: From June 19 - 21, several members of Region 10's Emergency Management Program will participate in the CLEAN PACIFIC conference in Portland, Oregon. This conference brings together parties responsible for oil spill prevention and response operations in the Western United States and Canada to discuss best practices and build interagency relationships vital to a successful response. In conjunction with the conference, the Pacific States/British Columbia Oil Spill Task Force is holding its annual meeting with a focus on abandoned and derelict vessels and sharing best practices and lessons learned across the west coast. The Task Force is made up of representatives from the states of Hawaii, California, Oregon, Washington and Alaska and the Province of British Columbia to address common oil spill planning, prevention and response issues.

Region 10 to Issue City of Kendrick (ID) Wastewater Treatment Plant Permit: Region 10 plans to issue the final NPDES permit for the City of Kendrick Idaho's wastewater treatment plant by June 29th with an effective date of September 1, 2018. The City uses a lagoon system and disinfection by chlorine to treat wastewater before discharging to the Potlatch River near Kendrick, Idaho. Six miles from the City's outfall, the Potlatch joins the Clearwater River within the boundary of the Nez Perce Reservation. This permit includes a five year compliance schedule for new seasonal ammonia limits and a compliance schedule of 13 years to meet temperature effluent limits.

EPA Continues to Support Oregon's Response to Harmful Algal Blooms and Drinking Water Advisories: Region 8 has joined Region 10 and EPA Headquarters in supporting the City of Salem's response to harmful algal blooms at Detroit Lake by providing test kits and analytical support. Cyanotoxin concentrations have recently increased again in Detroit Lake. Although the most recent drinking water finished water samples have showed cyanotoxin concentrations below the health advisory values, there are still detections of cyanotoxins above the detection limit at certain locations. *The drinking water advisory remains in place while the city is working on adding new treatment, including powdered activated carbon at the plant intake, and while they consider re-imposing a recreational advisory.* The city has also purchased and will shortly put in place ELISA analysis at the plant to quickly analyze cyanotoxins as a potential early warning system. One outstanding technical question is the role of "top-spill" at the Detroit Dam in exporting cyanobacteria and/or toxins downstream to the plant intake. Since the advisory began, the Corps of Engineers delayed further top-spill, however, the spill likely to commence in the near future because it is mandated by the National Marine Fisheries Biological Opinion and is necessary to protect endangered salmonids.

Office of Administration and Resources Management

Hot Topics

OARM Issues Notice of Suspension to Former Volkswagen Official

On June 7, 2018, the EPA Suspension and Debarment Official (SDO) issued a Notice of Suspension to Martin Winterkorn, the former CEO and Chairman of the Management Board of Volkswagen in Wolfsburg, Germany. The suspension is related to VW's emissions testing defeat device scheme, and is based on an indictment charging Mr. Winterkorn with one count of conspiracy, in violation of 18 U.S.C. § 371 (Conspiracy to Defraud the United States, to Commit Wire Fraud, and to Violate the Clean Air Act) and three counts of wire fraud, in violation of 18 U.S.C. § 1343 and 2. The suspension imposes an immediate exclusion from receiving federal contracts and covered transactions to protect the public interest pending completion of legal proceedings.

Employee Viewpoint Survey

As of the conclusion of the 2018 Employee Viewpoint Survey on June 13, EPA's final agency-wide response rate is 54%. Preliminary results indicate that the Office of General Counsel has the highest EPA headquarters response rate of 77% and Regions 8 and 10 have the highest regional response rate of 62.8%. The government-wide response rate is 34%.

Upcoming Major Decisions and Events

None

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Office of Air and Radiation

Hot Topics

Tracking SIP Actions:

- Total Number of SIPs submitted to Regions in FY 2018: 214
- Total Number of SIP Submittals with Final Action taken by the Regions in FY 2018: 176
- Total Number of Pending SIPs: 763

Packages at OMB for Review:

- Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration (Proposed Rule)
- NESHAP: Surface Coating of Large Appliances; Printing, Coating, and Dyeing of Fabrics and Other Textiles; and Surface Coating of Metal Furniture RTR (Proposed Rule)
- Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes (Proposed Rule)
- Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020 (Proposed Rule)
- Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy (Proposed Rule)
- Light-Duty Vehicle GHG Program Technical Amendments (Proposed Rule)

Packages that will move soon to OMB for Review:

- Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits (Final Rule)
- Standards of Performances for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced Air Furnaces Amendments (Proposed Rule)
- Standards of Performances for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced Air Furnaces (ANPRM)
- Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements (Final Rule)
- Determination Regarding Good Neighbor Obligations for the 2008 NAAQS (Proposed Rule) – Signature needed by June 29

Packages that will move soon to Signature:

- Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (Withdrawal of Proposed Rule) – Note OAR is updating the package and will be submitting a new version to the 3rd floor soon
- Mercury and Air Toxics Standards (MATS) Electronic reporting Requirements (Final Rule)

Upcoming Major Decisions and Events

Public Hearing: On June 22nd, EPA will hold a public hearing here in Washington, DC, on its proposed denial of five petitions submitted under section 126 of the Clean Air Act. The state of Delaware submitted four of these petitions, and Maryland submitted one.

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Office of Chemical Safety and Pollution Prevention

IMPORTANT DEADLINES

Row	Determination Type	Pending on 6/12/2018	Determinations Completed[1] as 6/12/2018	Determinations Posted on the Website as of 6/12/2018[6]
1	# of "not likely" determinations	**1**	**124[4]**	**122[4]**
2	# of §5(e) Orders signed by both EPA and the submitter	-	**402**	**400**
3	# of §5(e) Orders signed by EPA and awaiting submitter signature	**43**	-	-
4	# of non-Order SNURs/"not likely" determinations	**0**	**0**	**0**
5	# of cases in post-FOCUS final determination development[5]	**316[3, 5]**	-	-
6	# of cases flagged for in-depth review	**42**	-	-
7	# of PMNs, SNUNs and MCANs awaiting FOCUS (within 90-day review)	**44**	-	-
8	# of LVE/LOREX exemption grants	-	**608**	**599**
9	# of LVE/LOREX exemption denials	-	**121**	**121**
10	**Total number of cases**	**446**	**1255**	-
11	Normal active workload for the New Chemicals Program	300	-	-
12	Number of cases undergoing testing or data development by submitter	72[3]	-	-
13	**Backlog[2]**	74	-	-

[1] "Determinations Completed" means that EPA has completed its reviews on these cases and that final determinations have been made by EPA under TSCA section 5(a)(3).

[2] (Total number of cases) – (Normal active workload for the New Chemicals Program) - (Number of cases undergoing testing or data development) = Backlog

[3] Of these cases, approximately 58 are "active" lung toxicity cases that are suspended while submitters either conduct or are deciding whether to conduct testing to develop data on pchem properties, exposures and toxicity.

[4] "Not Likely" determinations are not posted until the final signed determination document is prepared and has been shared with submitter.

[5] These cases are those for which Post-FOCUS work is underway to develop: not likely determinations; non-Order SNURS coupled with not likely determinations; or section 5(e) or 5(f) Orders. When the OPPT Office Director decides which of these regulatory paths to follow, the case is moved to: Row 3 when the section 5(e) or 5(f) Order is sent to the submitter for signature; Row 4 when the SNUR is published and the not likely determination document is signed; and Row 1 when the determination document is sent to the OPPT OD for signature.

[6] These are all only final determinations posted on the web: grants and denials.

Hot Topics

Second Anniversary of the Frank R. Lautenberg Chemical Safety for the 21st Century Act. On June 22, EPA will announce that it has met another set of milestones under the Toxics Substances Control Act, as amended by the Lautenberg Chemical Safety for the 21st Century Act. EPA will release guidance and policy on confidential business information, a strategy to reduce animal testing, and a final mercury inventory rule by the Act's June 22, 2018 deadlines.

Updating Hazard Standards to Reduce Exposures to Lead-Contaminated Household Dust. On June 22, EPA will announce a proposal to lower standards for lead in dust for floors and window sills. The new proposed standard for lead in dust for floors and window sills will be more protective and will be an important step to reduce lead exposure. These standards apply to most pre-1978 housing and child-occupied facilities, such as day care centers and kindergarten facilities.

Upcoming Major Decisions and Events

Strategy to reduce animal testing. On June 22, EPA will announce its Strategic Plan to reduce the use of vertebrate animals in chemical testing. The strategy promotes the development and implementation of alternative test methods and strategies to reduce, refine or replace vertebrate animal testing and incorporates input from public meetings and written comments.

Final rule on reporting mercury manufacture and imports. On June 22, EPA will announce its final rule setting forth reporting requirements for the TSCA Mercury Inventory. The information collected though the new reporting requirements will be used to develop future inventories of mercury and mercury-containing product supply, use, and trade in the United States.

CBI expanded access guidance. On June 22, EPA will announce guidance for state, tribal and local governments, medical personnel and emergency responders on sharing confidential business information (CBI). These guidance documents specify the process that will enable other governmental entities and medical personnel and emergency responders to request CBI information.

Unique identifiers policy. On June 22, EPA will announce a policy and procedures for assigning unique identifiers to allow the public to better track information on chemicals while protecting CBI. An identifier will be applied to a substance, whose identity is protected as CBI, as well as to other related information or submissions concerning the same substance. This will allow the public to connect information related to the same substance, even while the specific identity is protected as confidential.

Generic names guidance. On June 22, EPA will announce guidance on structurally descriptive generic names. This guidance will allow EPA to share more information with the public about the structure of substances while protecting the confidential elements of the substance's specific chemical identity. TSCA Submitters claiming the specific chemical identity of a chemical substance as CBI are required to supply a structurally descriptive generic name that can be disclosed to the public.

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Office of the Chief Financial Officer

Hot Topics

- On June 12, 2018, the Senate Appropriations Subcommittee on Interior, Environment and Related Agencies considered and reported the FY 2019 Appropriations Bill. Title II of the bill funds the EPA at $8.058 billion, which is $1.878 billion above the FY 2019 President's Budget request. Additionally, the Committee provided $766 million to the EPA separately designated for infrastructure investments to the states. Combined, the total agency funding agreed to by the Senate Subcommittee for FY 2019 is $8.824 billion, which equals the FY 2018 Enacted Budget and is $501 million higher in total than the House Appropriations Full Committee level of $8.323 billion.
- Yesterday (June 14), the Senate Full Committee considered and reported the subcommittee bill by a unanimous vote of 31-0. The Full Committee adopted a bipartisan manager's amendment package by unanimous consent. This amendment contained seven requirements affecting EPA. There was no change to the approved SAC Subcommittee funding levels.
- OCFO continues to coordinate with the agency to review responses to House Appropriations Committee's FY 2019 budget hearings Questions for the Record (QFRs). Only a few remain to be cleared by OMB. OCFO also is coordinating review of the SAC Hearing transcript and the SAC QFRs, the latter of which were received earlier this week.

Upcoming Major Decisions and Events

- The DA, COO, CFO and other senior leaders will attend the OMB/EPA Strategic Review meeting on June 19.
- OCFO is working with AO's OCI to address any senior leader comments due June 15 on materials for the FY 2018 second quarter Administrator's Quarterly Performance Review scheduled for June 19 (3:00-5:00 PM EDT) and includes AAs/DAAs and RAs/DRAs.
- As follow up to the DA briefing earlier this week on summer planning and budget sessions at the July Senior Leadership Council, the CFO will send invitations and supporting materials to the ECOS Officers and National Tribal Council Executive Committee members. Invitations are for individual sessions for ECOS officers and NTC EC members with the DA the morning of July 18 and a discussion with both groups and the SLC the afternoon of July 18 regarding strategies for implementing selected agency priorities. OCFO will continue to coordinate with OCIR and OITA.

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Office of Congressional and Intergovernmental Relations

Hot Topics

June 20 -- Senate Environment and Public Works Committee confirmation hearing for Peter Wright, nominee for Assistant Administrator for OLEM and Chad McIntosh, nominee for Assistant Administrator for OITA – 10am, 406 Dirksen Building

June 21 -- House Science Subcommittee on Environment will hold a hearing on: Background Ozone levels and International Transport of Ozone 10am, 2318 Rayburn **(No EPA Witness)** Witnesses include:

- **Ms. Diana Rath,** Executive Director, Alamo Area Council of Governments
- **Mr. Timothy Franquist**, Air Quality Division Director, Arizona Department of Environmental Quality
- **Dr. Elena Craft**, Senior Health Scientist, Environmental Defense Fund
- **Mr. Gregory Stella**, Senior Scientist, Alpine Geophysics

Upcoming Major Decisions and Events

- **Week of June 18 –** Senate Commerce TA on vessels discharge w/OW and OGC
- **June 22 –** Congressman Latta staff and HEC staff briefing on HABs in drinking water
- **June 25-26** – PFAS community engagement meeting in Exeter, NH w/OW, R1
- **June 26** – RPM Act discussion with HEC staff
- **June TBD –** Senator Baldwin staff call on PFAS actions w/OW
- **June TBD-** Congressman Doyle staff briefing re: PFAS actions
- **TBD** – Sen. Isakson (GA) staff briefing on new chemicals process w/OCSPP
- **TBD** – Appropriations staff briefing on PRIA fees w/OCSPP, OCFO
- **TBD** - SEPW/HEC staff briefing on TSCA first 10 chemical problem formulations w/ OSCPP
- **TBD**- Congressman Boyle (PA) staff briefing re: PFAS actions w/ OW
- **TBD**- Sen. Peters (MI) staff call on PFAS actions w/OW
- **TBD**- Cong. Joyce (OH) request to brief Mentor, OH officials on GLRI (incl. potential funding)

Office of Enforcement and Compliance Assurance

Hot Topics

Settlement with New York City Housing Authority for Lead-Based Paint Violations
On June 11, 2018, the United States filed a Consent Decree to settle admitted violations by the New York City Housing Authority (NYCHA) of federal lead-based paint requirements, housing standards, and other laws. NYCHA is the largest Public Housing Agency in the United States. EPA and the U.S. Department of Housing (HUD) were plaintiffs to the case, which was prosecuted by DOJ's Assistant U.S. Attorney for the Southern District of New York. In the Consent Decree, NYCHA admitted and accepted responsibility for false statements to HUD regarding its compliance with federal laws; violation of federal lead-based paint requirements, including EPA's Renovation, Repair and Painting rule, and the Lead-Based Paint Disclosure Rule, and violation of housing standards related to pests, mold, heating and elevators. To date, 19 children associated with affected properties were diagnosed as having elevated blood-lead levels. Lead dust from disturbed lead based paint is the leading cause of childhood lead poisoning. The Consent Decree will be in effect at least 5 years and will remain in effect as long as needed. It includes the appointment of an independent monitor who will have authority to establish performance standards and action plans to ensure NYCHA's compliance with the applicable requirements. The City of New York also committed to provide $1 billion in additional funds to improve the affected properties over the first 4 years and $200 million each year thereafter that the decree remains in effect, for a minimum commitment of $1.2 billion. The settlement focuses on protecting human health and ensuring compliance and does not impose penalties for past violations.

Settlement with Jack Noble to Resolve Clean Water Act Violations
On June 11, 2018, DOJ and EPA lodged a consent decree with Humboldt County, California landowner, Jack Noble, to resolve violations of the Clean Water Act. Under the proposed settlement, Mr. Noble will remove concrete and other debris that he dumped into the Van Duzen River, create woody alcoves in the river for fish habitat, revegetate the banks to restore the river, and pay a civil penalty of $10,000.

Settlement with Decostar Industries to Resolve RCRA Hazardous Air Emission Violations
On June 12, 2018, EPA reached an administrative settlement with Decostar to resolve RCRA organic air violations. Under the settlement, the company is required to implement a leak detection and repair program and pay a $377,900 penalty. Decostar will also carry out a supplement environmental project to upgrade equipment upgrade at a cost $2.7 million. The steps that Decostar will take under the settlement will protect workers and the surrounding community and improve overall air quality.

Upcoming Major Decisions and Events

On June 15, 2018, EPA's investigative team for the VW criminal case will receive the Executive Office for U.S. Attorneys Directors Award for "Superior Performance by a Litigative Team."

On June 21, 2018, OECA AA Susan Bodine, R8 RA Doug Benevento, and Acting AAG for ENRD Jeff Woods will tour the Colorado Springs municipal separate storm sewer system and receiving waters.

Office of Environmental Information

No Submission this week

Office of General Counsel

Hot Topics

- *State of Georgia v. Pruitt*, No. 15-cv-79 (S.D. Ga.). New development: On June 8, the court preliminarily enjoined the 2015 Rule defining "waters of the United States," finding that the plaintiff-States had demonstrated "a likelihood of success on their claims that the [2015 Rule] was promulgated in violation of the CWA and the APA," noting that the 2015 Rule appears to regulate waters that do not have an effect on the chemical, physical, and biological integrity of navigable waters and to not be a logical outgrowth of the proposed rule.

- *Nat'l Envtl. Dev. Ass'n Clean Air Project v. EPA*, No.16-1344 (D.C. Cir.). New development: On June 8, the court upheld EPA's 2016 amendments to the Regional Consistency Rule Regulations under the CAA, which provide that an EPA region need not seek concurrence from headquarters to take an action that is inconsistent with EPA's national policy when such inconsistency is required for the agency to act in accordance with a federal district or circuit court decision.

- *States of New York and Connecticut v. Pruitt*, No. 1:18-cv-00406-JGK (S.D.N.Y.). New development: On June 12, the court issued an opinion and order requiring EPA to fulfill its overdue nondiscretionary duty to act to fully resolve interstate transport obligations under the CAA Good Neighbor provision for the 2008 ozone NAAQS for five states (Illinois, Indiana, Michigan, Virginia, and West Virginia). As per the statement of undisputed facts jointly filed by EPA and the plaintiffs, the order requires EPA to sign and disseminate (e.g., via web posting) a proposal by June 29, 2018, and a final action by December 6, 2018.

- *Maryland v. Pruitt*, No. Civ-JKB-17-2939 (D. Md.). New development: On June 12, the court issued a memorandum opinion and order and opinion ordering EPA to rule by September 15, 2018 on Maryland's petition under Clean Air Act § 126, requesting EPA to find that emissions from 36 power plants in five upwind states significantly contribute to Maryland's nonattainment of the 2008 ozone NAAQS. Plaintiffs (Maryland and Chesapeake Bay Foundation) had requested a deadline of 60 days from the court's ruling; EPA had asked for December 31, 2018. EPA must hold a hearing and keep the record open for 30 days thereafter.

- *Waterkeeper Alliance et al. v. Pruitt*, No. 18-cv-3521 (N.D. Cal.). New development: On June 13, environmental plaintiffs filed a complaint challenging the Army Corps' and EPA's 2015 Rule defining "waters of the United States" and the agencies' February 2018 Applicability Rule, which added an applicability date to the 2015 Rule. Plaintiffs seek an order vacating the Applicability Rule and specific portions of the 2015 Rule, claiming that the rules' promulgation violated the CWA, APA, NEPA, and ESA.

Upcoming Major Decisions and Events

6/28 Motions hearing in *Lipton v. EPA*, FOIA lawsuit filed by New York Times alleging that EPA failed to respond to a FOIA request and to make records available that were requested three or more times (D.D.C.).

Office of International and Tribal Affairs

Hot Topics

EU Meeting on EPA's Formaldehyde Emissions Standards - The EU Ambassador to the U.S. and the Embassies of Spain and Italy requested a meeting with EPA to discuss their concerns regarding EPA's Formaldehyde Emission Standards for Composite Wood Products Rule (TSCA Title VI) which came into effect on June 1, 2018. EPA (OCSPP, OECA, OGC and OITA) and USTR met with the EU Delegation to discuss the new standards and compliance with the June 1 date. This meeting was held in advance of an upcoming WTO Technical Barriers to Trade Committee meeting next week. USTR thought EPA did an outstanding job of responding to the EU concerns and demonstrated a true willingness to be helpful and accommodating to EU industry (wherever possible within our authorities).

Australia Cooperation on Water – EPA (OW, ORD, OITA) met with the Australia's Department of Agriculture and Water Resources (DAWR) to discuss advancing water cooperation under our existing MOU with DAWR, which was renewed in 2016. In the meeting we shared best practices and challenges in the following areas: water infrastructure, water reuse, water security/resilience, water technology/innovation, water efficiency labeling, and water modeling. We agreed to identify a few priority areas for future cooperation under the MOU and exchange information in the other areas of interest.

EPA's American Indian and Alaskan Native Special Emphasis Program - OITA led a strategic planning workshop for EPA's American Indian and Alaskan Native Special Emphasis Program (AI/AN SEP) to review of EPA's *Diversity and Inclusion Strategic Plan (2017 - 2021)*, *Special Emphasis Program Managers Handbook (2018)*, and *FY 2017 Management Directive 1715 Report*. Attendees prepared a draft FY 2019 AI/AN Special Emphasis Program Strategic Plan, that includes a commitment to produce EPA recruitment materials targeting potential American Indian and Alaskan Native applicants, and profiling current AI/AN employees as examples of successful professionals across a broad range of job classifications and levels of seniority. The workshop was attended by staff from Regions 3, 5, 6, 8, and 10, OCR, OARM and OITA.

Upcoming Major Decisions and Events

North American Development Bank – The North American Development Bank will be meeting on June 18 and 19 in Mexico to discuss water infrastructure projects and the recent merger with the Border Environment Cooperation Committee. The U.S. Board members include representatives from Treasury, State Department and EPA (OITA PDAA).

Commission for Environmental Cooperation (CEC) Council Session – The CEC Council, consisting of the Environmental Ministers from the U.S., Canada, and Mexico, will be meeting on June 26 and 27 in Oklahoma City. The U.S. (EPA Administrator) is the chair of this year's Council Session, which will focus on "Partnerships and Innovation for Green Growth."

G7 Environmental Ministerial Preparation Meeting – EPA and State Department will be attending a G7 Environmental Ministerial preparatory meeting on June 28 and 29 in Montreal. Following guidance of the NSC, we will continue preparations on the three topics proposed by Canada - climate and clean growth, sustainable finance, and resource efficiency including marine litter.

Office of Land and Emergency Management

Hot Topics

Coal Combustion Residuals (CCR). (see below)

Clean Air Act 112(r) Risk Management Program (RMP) Reconsideration NPRM. A public hearing was held today, and approximately 50 people presented testimony at the hearing. Participants represented industry groups, environmental organizations, community groups, consulting firms, regulated facilities, and others. The public comment period ends July 30, 2018.

Ongoing major Superfund NPL sites (including Colorado Smelter, East Chicago, West Lake, Bonita Peak, Hudson River, Portland Harbor, Mississippi Phosphates, Oak Ridge, Edwards AFB, Berry's Creek, American Cyanamid).

CERCLA 108(b) Financial Assurance – Next Three Sectors. We are working with OGC, OP, and the AO to plan our approach to the next three sectors.

PFAS. We are working with ORD and OW to develop groundwater cleanup recommendations for PFOA and PFOS. OLEM is working with the AO, OGC, OECA and other AAships to look at available statutory mechanisms for PFOA and PFOS to be "hazardous substances" under CERCLA.

Emergency Response. The Environmental Response Team is working with Region 9 as part of the inter-governmental effort addressing volcano activity in Hawaii. Total current staffing is 23.

Upcoming Major Decisions and Events

BUILD Act. A notice to solicit comment on aspects of the BUILD Act was signed, and we anticipate FR publication by June 21.

Coal Combustion Residuals. The proposed rule is with OMB and we anticipate signature by June 25. We anticipate approval of Oklahoma's CCR permitting program the week of June 18. Georgia submitted its CCR permit program application to EPA. It is undergoing review.

E-Manifest Launch. We anticipate issuing a press release on June 29, for the launch on June 30.

Hazardous Waste Pharmaceuticals Final Rule. We briefed the DA today, and we anticipate the rule package going to OMB soon.

Hazardous Substances Spill Prevention Proposed Rule. We are working toward OMB clearance to allow for signature by June 15.

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Office of Policy

Hot Topics:

Number of Actions to OFR this Year:

- Signed by Regions:
  - Notices: 45
  - Proposed Rules: 134
  - Direct Final Rules: 9
  - Withdrawal of Proposed Rule: 1
  - Withdrawal of Direct Final: 4
  - Final Rules: 106
- Signed by HQ:
  - Notices: 222
  - Proposed Rules: 37
  - NPRM Extension: 1
  - Withdrawal of Direct Final: 1
  - Interim Final: 1
  - Final Rules: 67

Number of Actions to OFR this Week (June 8 – June 14):

- Signed by Regions:
  - Notices: 1
  - Proposed Rules: 10
  - Direct Final Rules: 1
  - Withdrawal of Proposed Rule: 0
  - Withdrawal of Direct Final: 0
  - Final Rules: 3
- Signed by HQ:
  - Notices: 10
  - Proposed Rules: 4
  - NPRM Extension: 0
  - Withdrawal of Direct Final: 0
  - Interim Final: 0
  - Final Rules: 1

Active Interagency Reviews from OMB	
Title	**OMB Due Date**
HHS FRM: "Federal Policy for the Protection of Human Subjects: Six Month Delay of the General Compliance Date of Revisions While Allowing the Use of Three Burden-Reducing Provisions During the Delay Period" (a.k.a. Common Rule Delay)	06/13/2018

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Documents Submitted to OFR from June 6 - 12, 2018		
FRL	**Title**	**Date Submitted to OFR**
9979-53-OW	Announcement of the Per- and Polyfluoroalkyl Substances (PFAS) New England Community Engagement	6/12/2018
9979-49-Region 9	Approval and Promulgation of Air Quality Implementation Plans; Arizona; Nonattainment Plan for the Miami SO2 Nonattainment Area	6/12/2018
9979-47-OAR	Proposed Information Collection Request; Comment Request; Fuel Use Requirements for Great Lake Steamships (Renewal)	6/12/2018
9979-07-Region 1	Air Plan Approval; Maine; Infrastructure State Implementation Plan Requirements	6/12/2018
9978-97-Region 1	Air Plan Approval; Connecticut; Prevention of Significant Deterioration; Revisions to the Prevention of Significant Deterioration Greenhouse Gas Permitting Authority	6/12/2018
9979-39-Region 3	Approval and Promulgation of Air Quality Implementation Plans; West Virginia; Regional Haze Plan and Visibility Requirements for the 2010 Sulfur Dioxide and the 2012 Fine Particulate Matter Standards	6/11/2018
9979-33-OAR	Relaxation of the Federal Reid Vapor Pressure (RVP) Gasoline Volatility Standard for Baton Rouge, Louisiana	6/11/2018
9979-32-Region 5	Wisconsin Regional Haze 5-year Progress Report	6/11/2018
9979-26-OCSPP	Agency Information Collection Activities; Pre-Manufacture Review Reporting and Exemption Requirements for New Chemical Substances and Significant New Use Reporting Requirements for Chemical Substances; Emergency Processing Request Submitted to OMB	6/11/2018
9979-12-Region 10	Approval of the Application by the State of Idaho to Administer the National Pollutant Discharge Elimination System (NPDES) and Electronic Reporting	6/11/2018
9979-03-OEI	Cross-State Air Pollution Rule and Texas SO2 Trading Programs (Renewal)/ICR No.2391.05	6/11/2018
9978-55-OCSPP	Ortho-Phthalaldehyde; Receipt of Application for Emergency Exemption, Solicitation of Public Comment	6/11/2018

9978-41-OCSPP	Receipt of Several Pesticide Petitions Filed for Residues of Pesticide Chemicals in or on Various Commodities	6/11/2018
9978-37-OCSPP	Difenacoum; Notice of Receipt of Requests to Voluntarily Cancel Certain Pesticide Registrations	6/11/2018
9978-34-OCSPP	Pesticide Product Registration; Receipt of Applications for New Active Ingredients	6/11/2018
9978-29-OCSPP	Receipt of Several Pesticide Petitions Filed for Residues of Pesticide Chemicals in or on Various Commodities	6/11/2018
9977-75-OCSPP	Extract of Swinglea Glutinosa; Exemption from the Requirement of a Tolerance	6/11/2018
9979-42-Region 3	Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Interstate Transport Requirements for the 2012 Fine Particulate Matter Standard	6/8/2018
9979-41-OP	Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process	6/8/2018
9979-34-Region 9	Approval of Air Plan Revisions; Approvals and Promulgations: California; Placer County Air Pollution Control District; Stationary Source Permits	6/8/2018
9977-78-OCSPP	Notification of Submission to the Secretary of Agriculture; Harmonize 40 CFR 26 Subparts C, D, and K with Subpart A (the Common Rule)	6/8/2018
9979-44-Region 3	Removal of Pennsylvania Gasoline Volatility Requirements for the Pittsburgh-Beaver Valley Area	6/8/2018
9979-43-Region 3	Removal of Pennsylvania Gasoline Volatility Requirements for the Pittsburgh-Beaver Valley Area	6/8/2018
9979-22-OARM	Proposed Information Collection Request; Comment Request; Monthly Progress Reports (Renewal)	6/8/2018
9979-21-Region 3	National Oil and Hazardous Substances Pollution Contingency Plan; National Priorities List: Deletion of the Ordnance Works Disposal Areas Superfund Site	6/8/2018
9979-16-OCSPP	Addition of Nonylphenol Ethoxylates Category; Community Right-to-Know Toxic Chemical Release Reporting	6/7/2018
9978-76-OCSPP	Asbestos; Significant New Use Rule	6/6/2018
9978-40-OCSPP	Problem Formulations for the Risk Evaluations to be Conducted under the Toxic Substances Control Act, and Application of Systematic Review in TSCA Risk Evaluations; Notice of Availability	6/6/2018

9979-19-OAR	Response to Clean Air Act Section 126(b) Petitions from Delaware and Maryland; Public Hearing	6/6/2018
9979-06-Region 3	District of Columbia: Proposed Authorization of District Hazardous Waste Management Program Revisions	6/6/2018
9979-08-Region 6	Underground Injection Control Program; Hazardous Waste Injection Restrictions; Petition for Exemption Reissuance - Class I Hazardous Waste Injection; U. S. Ecology Texas (USET) Robstown, Texas	6/6/2018
9978-99-OLEM	Proposed Information Collection Request; Comment Request; Trade Secrets Claims under the Emergency Planning and Community Right-to-Know Information	6/6/2018

Upcoming Major Decisions or Events

Preparedness and Recovery Webinar. On June 21, EPA will host a webinar co-produced by the Office of Environmental Justice to share information on legal requirements and practices that can help ensure the protection of first responders and communities affected by disasters.

Office of Research and Development

Hot Topics

PFAS ECOS Call

On June 20, ORD is coordinating the ECOS-EPA PFAS call. The purpose of this bimonthly call is for EPA and state partners to share information on PFAS-related science and technical activities. Agenda topics include an update on state-level risk communication of PFAS contamination, MassDEP drinking water guidelines for five PFAS chemicals, a recap from EPA's PFAS National Leadership Summit and next steps, and EPA ORD efforts on evaluating PFAS treatment performance and cost.

ISA Update

On June 15th, ORD anticipates releasing the "Second External Review Draft Integrated Science Assessment for Oxides of Nitrogen, Oxides of Sulfur, and Particulate Matter – Ecological Criteria" for public comment and external peer review. This ISA is part of the review of the secondary (welfare-based) National Ambient Air Quality Standards (NAAQS) for these pollutants. This draft ISA will be reviewed by a panel of the Clean Air Scientific Advisory Committee (CASAC) at a public meeting scheduled for September 5-6, 2018.

Upcoming Major Decisions and Events

Next week, New England state commissioners and staff will visit ORD's Atlantic Ecology Division. Participating states include CT, MA, ME, NH, RI and VT, as well as Regional Administrator Alexandra Dunn and Deputy Regional Administrator Deb Szaro. The visit will provide an opportunity for Region 1 states to learn more about EPA ORD science and technical capabilities, meet ORD scientists and see first-hand some of the innovative work being done by ORD researchers. This visit will include a lab tour and presentations focused on topics of interest to New England states including nutrients, algal blooms, PFAS, coastal resilience as well as an overview of EPA's Chemistry Dashboard.

Nutrients Visioneering Meeting

On June 19th, ORD and OW will participate in a nutrients visioneering meeting in Woods Hole, MA. The meeting, hosted by the Challenging Nutrients Coalition, will bring together bold thinkers to generate new ideas for addressing excess nitrogen and phosphorus in our nation's waterways. The Challenging Nutrients Coalition is a group of federal agencies, universities, and non-profit organizations committed to working together to foster innovative science and technology solutions for addressing excess nitrogen and phosphorus in our nation's waters. The discussions and concepts generated during the visioneering meeting will be used to help inform the next set of challenges and initiatives for the Coalition.

Implementation of EPA's Plan to Increase Access to Results of EPA-Funded Scientific Research

During the week of June 18th, EPA will release *Implementation of EPA's Plan to Increase Access to Results of EPA-Funded Scientific Research* - A Report to Congress – 2018. The report is in response to Congressional language in the 2018 Omnibus Appropriations.

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Office of Water

Hot Topics

Beaches Environmental Assessment and Coastal Health (BEACH) Act Report to Congress: This week, OW sent forward to OP the BEACH Act Report to Congress for OMB review. The BEACH Act of 2000 directs the EPA to submit a report every four years. The last report submitted to Congress, however, was in 2006. In response to the OIG's finding that the EPA did not meet this statutory obligation, the Agency committed to submit this final report to Congress by August 15, 2018, as part of our corrective action. This final report relies heavily on the recently released *2017 Five-Year Review of the 2012 Recreational Water Quality Criteria* and the Agency's beach program website.

Alaska Mitigation Memorandum of Agreement (MOA): This week, the EPA and Department of Army signed a joint MOA on Alaska Mitigation. The MOA updates and replaces the 1994 Alaska Mitigation Memorandum. Next week, Lee Forsgren and Army leadership will travel to Alaska to hold listening sessions on the revised MOA with local stakeholders, including other federal and state agencies, tribal representatives, and industry. The last stakeholder session will be open to the press.

Upcoming Major Decisions and Events

WIFIA: Next week, the EPA anticipates closing the 2nd WIFIA loan to the City of Omaha in the amount of $69.7 million for the construction of a retention treatment basin to address combined sewer overflows in the Saddle Creek Basin as required by the city's consent decree, Clean Water Act permit, and long-term control plan. This project will address water quality concerns in Papillion Creek and the Missouri River by removing an estimated 1.2 billion gallons of combined sewage discharge into the Little Papillion Creek, and removing floatables and other solids from combined sewer overflows. We anticipate sending the loan approval package for the Administrator's signature early next week.

Waterkeeper II Steam Electric FOIA: Next week, the EPA anticipates issuing the final production for this FOIA, pursuant to court order.

Region 1

Hot Topics

22nd Annual EPA and State Enforcement, Compliance, and Assistance Meeting
On June 13, the Region hosted its 22nd Annual EPA and State Meeting for Enforcement, Compliance and Assistance in Boston, MA. The event included participants representing all six New England states, DOD, NEWMOA and OECA. A major meeting focus was lean principles and lessons learned from lean initiatives.

R1 DOD Visit to Fort Devens PFAS Site
On June 15, RA Dunn, Maureen Sullivan of the Office of the Secretary of Defense and John Tesner the Director for Restoration at US Army visited the Fort Devens Superfund Site with Representatives from both Devens and Ayer to discuss responsibilities of treatment and cost of PFAS remediation.

Community Engagement throughout New England Communities
In addition to the Federal Resource Roundtable held on June 12 – detailed in last week's report – where RA Dunn and the EPA joined HUD's RA David Tille and representatives from various federal agencies, RA Dunn and Region 1 staff spent this week focusing on community-scale engagement, including:

> *Mystic River Water Quality Report Card.* On June 13, Region 1 issued our annual Mystic River Water Quality Report Card at the Tufts University Boathouse on the Malden River in Medford. The report card and presentations from a local regulated water authority, the Mayor of Medford, and Massachusetts DEP Commissioner Martin Suuberg, detailed ongoing advancement toward clean water in the Mystic.
>
> *Revitalizing the Ocean State.* On June 14, RA Dunn announced $1.3 million in Brownfields funds to help assess and cleanup contaminated properties and promote employment opportunities related to Brownfields in Rhode Island. The event included Director Janet Coit of RIDEM and local community members.
>
> *Environmental Justice Call to Action Forum.* On June 14, RA Dunn and staff engaged with local community members and activists at an Environmental Justice Call to Action Forum at the New Bedford Superfund Site. Discussions included local Environmental Justice issues, Superfund, Brownfields, Workforce Development, Urban and Rural Revitalization. New Bedford Superfund site on the RA Redevelopment priority list.
>
> *State of the Lake.* On June 15, the Lake Champlain Basin Program funded by EPA will be releasing their latest "State of the Lake," with amplification from RA Dunn, providing a look back at recent years' progress based on a host of water quality metrics, as well details of upcoming local, state, and federal efforts in to clean up this iconic waterway.

Upcoming Major Decisions and Events

Partial Approval of New Hampshire's 2016 303(d) List
In response to the state's request, EPA intends to partially approve New Hampshire's 2016 final 303(d) list, most likely by the end of next week. The Region is deferring action on some units in the Great Bay estuary while we coordinate further with our partners and continue to evaluate the science.

Region 1 Highlights Cape Cod Nutrient Challenges
On June 18, Region 1 will host a tour of EPA nutrient pollution research on Cape Cod. Attendees will include ORD, congressional staff, and media outlets that cover these issues.

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Region 2

Hot Topics

Settlement Reached with New York City Housing Authority. On 6/11, the settlement in this action by HUD and EPA was lodged with the court (SDNY). The consent decree, which now awaits the court's approval, requires the appointment of an independent monitor who will be in charge of overseeing comprehensive corrective measures by NYCHA, including with regard to lead paint. It also requires the City of New York to provide $1.2 billion of additional capital funding to NYCHA over the next 5 years, and $200 million every year thereafter until the problems are fixed and the decree is no longer necessary.

Settlement of a RCRA Administrative Enforcement Case with U.S. Army's West Point Garrison. On 6/6, an administrative Consent Agreement and Final Order was issued resolving West Point's alleged violations of NY hazardous waste rules and federal underground storage tank rules. The Garrison will pay a civil penalty of $90,000, certify that it has come into compliance at the facility with the cited rules and comply in the future with these rules. NY was consulted in advance and had no concerns.

Agreement with Westchester County (NY) to Resolve Violations of Underground Storage Tank (UST) Rules. On 6/8, an administrative Consent Agreement and Final Order was issued resolving the county's alleged violations of UST rules. The County agreed to pay a civil penalty of $90,000 and certified that the operation of the UST systems at its 13 facilities is in compliance with the UST rules.

GenX - Chemours, Deepwater, NJ. Chemours' preliminary results for GenX sampling of monitoring wells, residential wells, and manufacturing operations indicate that 8 of 11 monitoring wells had detections of GenX (Dimer Acid) ranging from 4.5 parts per trillion (ppt) to 280 ppt (the 280 ppt was found in a co-located shallow and deep well; the next highest concentration found was 67 ppt). Two of the private wells sampled had concentrations of 11 and 13 ppt prior to GAC treatment but were non-detect after treatment. Chemours is claiming the results for the manufacturing operations to be Confidential Business Information; we are asking Chemours for substantiation of the claim. Follow-up steps with Chemours were discussed during the monthly call on 6/13. Chemours also notified us that draft GenX results for the Pennsville water supply have been received and are all non-detect.

Upcoming Major Decisions and Events

San Juan Local Emergency Planning Committee to Host Region 2 for "Core TSCA" Training. At the request of regulated businesses and interested stakeholders in PR, Region 2 is providing compliance assistance training on the TSCA "New and Existing Chemicals" regulations. The training will be held 6/19-20 and is being hosted by the San Juan Local Emergency Planning Committee (LEPC). Over 60 LEPC members and invited guests are expected to attend. The training will provide a thorough overview of compliance information for manufacturers, importers, and processors of chemicals and will give attendees the opportunity to have a one-on-one question and answer session with Region 2 inspectors.

Great Lakes Restoration Initiative Action Plan III Public Engagement Session. EPA will host the second of six informal public engagement sessions on the Great Lakes Restoration Initiative (GLRI) Action Plan III in Rochester, NY on 6/21. Members of the public will be able to learn more about the Plan development process, talk with representatives from EPA and other agencies and provide input on priorities to be used in the initial stage of developing a GLRI Action Plan covering FY-2020 through 2024.

- 6/18: Senior Region 2 staff are participating in a Lake Guardian event in Rochester, NY to highlight the survey of Lake Ontario (dive and sampling missions by EPA staff).
- 6/19: RA Pete Lopez is scheduled to meet with reporters from The Bergen Record for a profile interview and to discuss several hazardous waste site cleanups in northern New Jersey.

Region 3

Hot Topics

Restoration Advisory Board Meeting at the [HYPERLINK "https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0302639"]
On June 7, 2018, representatives from the Department of Defense (DOD), EPA, City of Suffolk (COS), Environmental Quality (DEQ), the Army, Army Corps of Engineers (USACE) and contractor, Board and community members and stakeholders, participated in discussions of the site and future activities. The Remedial Project Manager and Community Involvement Coordinator attended the meeting and as usual was an energetic discussion of activities timelines, and cost etc. The highlight of the discussion centered around a previous meeting and site visit attended by more than 30 high-level officials from the DOD, including the Assistant Secretary of Defense, Department of the Army, EPA, DEQ, USACE, COS, and others which resulted in increased emphasis and urgency on the cleanup and restoration activities. Approximately 30 people attended the meeting.

PA Mining to Implement NPDES Checklist
Water Protection Division staff participated in a PADEP Bureau of Mining training webinar for National Pollutant Discharge Elimination System (NPDES) mining permit writers on June 6 in Harrisburg, PA. The webinar outlined the rollout of the Pennsylvania NPDES mining checklist. The checklist was developed jointly by PADEP Bureau of Mining and Region 3 NPDES permits mining team and will guide permit writers in the permit development process. Pending PADEP final agreement, the tentative start date is July 1, 2018.

SRF Financial Training Held in Region 3
The Office of Infrastructure and Assistance hosted State Revolving Fund (SRF) financial training from June 5–7 in the regional office. Attendees included SRF staff from all regional states, HQ and Region 3. At a time when there is a renewed emphasis on infrastructure funding, the training focused on critical areas, including the grant funding process, managing cash flows, and conducting financial analysis and oversight. The training is part of EPA's continuous effort to strengthen its partnership with the states.

Wastewater Operator Training for PA Water Environment Association
On June 5-6, Walter Higgins of the Office of Infrastructure and Assistance conducted a full-day training session and two 30-minute presentations at the Pennsylvania Water Environment Association's Annual Conference in Hershey, PA. The conference is attended primarily by wastewater professionals (engineers, operators and equipment vendors). The full-day session was to prepare individuals for the Pennsylvania wastewater certification exam. The two presentations were on Asset Management and Nutrient Removal Optimization.

LCD Reviews MD and VA Lead Programs
In late May and early June, LCD met separately with the Maryland Department of the Environment (MDE) and the Virginia Department of Health (VDH), Virginia Department of Professional and Occupational Regulation (DPOR), and Virginia Department of Labor and Industry, respectively, for the end of year reviews of their Lead programs. The meetings allowed EPA to discuss Maryland's and Virginia's programs, including highlights and concerns that any of the involved parties might have. The meeting with Virginia personnel concentrated on each of the departments' function and funding issues. EPA was able to review and evaluate Virginia's progress meeting its grant commitments and accomplishing its deliverable outline within the grant award.

Region III's Small Business Program hosts multi-agency workshop
On June 13, 2018, Region 3's Small Business Program Coordinator and the Small Business Technical Advisor from GSA hosted over 100 small businesses on expanding opportunities and resources. A multi-agency panel discussion followed on the topic of how small businesses can engage the federal government. The event

ended with agency breakout sessions where small businesses were invited to share their capabilities with EPA, GSA, SBA, USDA and Commerce. The event was well received by the attendees who committed to attend in the future. The Agencies also committed to collaborate on future efforts.

Upcoming Major Decisions and Events

Regional Administrator Cosmo Servidio has the following events scheduled:

- June 14, 2018 – Urban Stromwater Meeting, Greensburg, PA
- June 14, 2018 – Farmer Agricultural Roundtable, Ruffs Dale, PA
- June 19, 2018 – Chester Environmental Partnership Meeting, Chester, PA
- June 19, 2018 – Montgomery Brownfields Press Event, Ambler, PA

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Region 4

Hot Topics

Daicel Safety Systems (Beaver Dam, KY)
Key Message: On June 11, 2018, Region 4 Administrator Trey Glenn closed the loop on the outstanding concerns with Daicel Safety Systems with Tony Hatton, Commissioner for the Kentucky Department of Environmental Protection. The Regional Administrator conveyed the region's plan to not send additional correspondence to the state or the company related to the matter at this time.

Mississippi Phosphates Corporation (Pascagoula, MS)
Key Message: Region 4 Administrator Trey Glenn concurred on the sale of the MPC trust assets to Hilco.

Upcoming Major Decisions and Events

Decisions
Grenada – The Region's position based on the information and proposed remedy submitted by the PRP.

Events
North Carolina Compliance Assurance Meeting. On June 19, 2018, Region 4 Administrator Trey Glenn and regional senior leadership will meet with the North Carolina Department of Environmental Quality to discuss general communication with the state as well as state specific compliance concerns. Raleigh, NC. Closed Press.

Everglades Restoration Strategies Principals Meeting. On June 20, 2018, Region 4 Administrator Trey Glenn will meet with the Secretary for the Florida Department of Environmental Protection for the semi-annual meeting to discuss the status of the Everglades. Miami, FL. Closed Press.

State Commissioners' Meeting. On June 21-22, 2018, Region 4 Administrator Trey Glenn will meet with the Region 4 State Environmental Commissioners to discuss broad programmatic and regulatory concerns as well as special state projects and focus areas. Miami, FL. Closed Press.

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Region 5

Hot Topics

Office of Inspector General Flint Report Expected to be Released Week of June 25
Key Message: The Region and HQ are coordinating on developing a desk statement in preparation for the release. The agency has concurred with OIG's recommendations and provided a response on May 30, 2018.

Mayor of Flint is Refusing to Sign the State's June 6 Administrative Consent Order
Key Message: It is MDEQ policy that significant deficiencies that have not been resolved in 120 days have a formal, agreed-upon schedule in a consent order. The order formally addresses previously identified deficiencies and does not mean that no progress is being made. In press accounts this week, the mayor refers to the order as "retaliatory and punitive."

Environmental Law and Policy Center (ELPC) Filed Motion Seeking Court to Require EPA Action on Lake Erie Impairment
Key Message: The June 8 motion asks the court to require EPA to develop a phosphorous total maximum daily load (TMDL) for western Lake Erie. The ELPC claims that the impairment designation imposed on the western Lake Erie basin triggers the CWA requirement for a TMDL.

Upcoming Events/Major Decisions

EPA to Hold a Public Engagement Meeting for the Great Lakes Restoration Initiative Action Plan III in Rochester, New York
Key Message: Region 5 and Region 2 are coordinating on the June 21 event. EPA and its federal partners are in the process of developing Action Plan III, which will outline the priorities and goals for the Great Lakes Restoration Initiative for the years 2020-2024.

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Region 6

Hot Topics

Tire Fire Response, Cuba, New Mexico
On June 9, 2018, the New Mexico Environment Department (NMED) requested EPA assistance in response to a tire fire about 5.9 miles south of Cuba, NM. An estimated 80,000 tires burned over a half acre plot, with the fire still not contained. EPA conducted air monitoring on-site and at the neighboring residential properties. All results were non-detect or below site-specific action levels. The New Mexico ambient air monitoring also shows no ambient air concerns. The fire was successfully extinguished June 14, 2018 and EPA assets and resources were demobilized.

HP Cylinders Emergency Response, Baytown, Texas
EPA and TCEQ continue for the $4.2 million impaired cylinder removal action and to visit with neighboring business to discuss project scheduling. This removal action is expected to take 4-6 months to complete. EPA response contractors continue to mobilize assets and resources to Stillwater Consultants, LLC to initiate removal action of 500 abandoned cylinders of compressed gas. EPA's Emergency Response Team mobilized to assist with VIPER data management configuration.

Bird Creek, Osage County, Oklahoma
Data analysis from the in-stream monitoring network at Bird Creek is currently ongoing. Warren American and Jireh have opposed a 90 day stay and EPA answers are due by June 19th.

Texas Impaired Waters List
The public comment period for the TCEQ's 2016 list of impaired waters ended June 4, 2018. Technical issues remain between TCEQ and Region 6 regarding the assessment of certain lakes/reservoirs with site-specific chlorophyll-a criteria which do not appear to be met, yet the state has not chosen to list them as impaired.

Upcoming Major Decisions and Events

St. James Parish South Louisiana Methanol LP, Louisiana
Region 6 intends to issue a federal register notice announcing the Administrator's decision on the South Louisiana Methanol Title V Petition.

Houston 2008 Ozone Standard Volatile Organic Compound SIP and Reasonably Achievable Control Technology
Region 6 intends to propose approval of the TCEQ VOC storage tank SIP revisions and proposed approval of the state's demonstration that reasonably achievable control technology regulating NOx and VOC emissions are in place for the 2008 Ozone NAAQS in the Houston/Galveston/Brazoria non-attainment area.

Arkansas Minor NSR State Implementation Plan
Region 6 intends to take final SIP action by June 20 to raise ADEQ's minor NSR permitting and de minimis thresholds. EPA received significant public comments on the proposed SIP changes from Sierra Club and more specifically on our 110(l) analysis (anti-backsliding into nonattainment) for the action. This will address two backlog SIP actions.

Oklahoma 2016 Air Permit Program Related Annual SIP Update
Region 6 intends to propose approval of selected revisions to the Oklahoma SIP submitted in their 2016 Annual SIP Update to revise incorporation by reference dates and emission inventory reporting requirements to be consistent with federal requirements.

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CAA TAS Application, Pueblo of Zia, New Mexico
Region 6 received the Pueblo of Zia's Treatment-As-State (TAS) application under the Clean Air Act on May 29. The next step is for EPA to issue a Notification of a Complete Application letter and send notification letters to affected governors and chiefs in the area. A 30-day public comment period will begin with the notification of a complete TAS application.

June 19	Tour of Houston Ship Channel, Houston, Texas
June 20	HARC Tour and Meeting, Houston, Texas
June 20	Houston Bar Association Luncheon, Houston, Texas
June 22	Louisiana Farm Bureau Annual Convention, New Orleans, Louisiana
June 22	LMOGA Refinery Managers Meeting, New Orleans, Louisiana

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Region 7

Hot Topics

West Lake Landfill (Bridgeton, MO)

Key Message: This week EPA Region 7 oversaw the installation of a non-combustible cover over portions of the West Lake site, conducted coordination efforts with the state and CAG, and continued to prepare the ROD amendment.

- On Monday June 11, EPA oversaw the installation of the non-combustible cover over two areas in the OU-1 Area 2 of the site. The work is estimated to take 40 days to complete and is required by an enforcement order for surface fire and migration mitigation where radiologically impacted material is present at the ground surface.
- The region hosted a call with the Missouri Department of Natural Resources to discuss the Technical Community Advisory Group's request to discuss air monitoring activities and data at the site. MDNR has agreed to jointly participate in the discussion with the TCAG and the region is now working to schedule the meeting.
- Efforts to prepare the Record of Decision Amendment and respond to comments for inclusion in the Responsiveness Summary are ongoing.

Cleburn Thermal Site Visit (Grand Island, NE)

Key Message: EPA Region 7 launched a thermal treatment system at the Cleburn Street Well Superfund site and conducted a related site tour open to stakeholders and local media.

- On June 12, a site tour was conducted on the thermal remedial action at the Cleburn Street Well site. The event included a demonstration of the thermal treatment technology that EPA will use to clean up the TCE contamination at the site. EPA, the Nebraska Department of Environmental Quality, the city of Grand Island, and multiple media were present. In total, approximately 40 people attended the tour and local media interviews were conducted.

Doe Run Meeting in St. Louis

Key Message: EPA Region 7 held a coordination meeting with Doe Run to discuss Superfund sites in Southeast Missouri.

- On June 8, a meeting was held with EPA Region 7 and Doe Run to discuss Superfund site related issues in Southeast Missouri. Topics discussed included financial assurance at two sites, closeout of Doe Run work at the Federal Tailings site, transfer of remaining work at Herculaneum, remaining items from a 2011 multi-media consent decree, the value of closing out orders, concern over Big River OU2 cost, and IROD vs final ROD for river and floodplain cleanup of Big River OU2.
- Additional topics of discussion included chemical smelting technology, industry perspective on lead, recent attribution studies, and liability of other downstream parties.

Upcoming Major Decisions and Events

Shell Creek Atrazine Delisting Event

Key Message: On June 15, Regional Administrator Jim Gulliford and Water, Wetlands, and Pesticide Division Director Jeff Robichaud will attend the Shell Creek Atrazine Delisting event in Schuyler, Nebraska.

Region 8

Hot Topics

UPDATE from 5/24: PFAS Contamination at Sugarloaf Fire Protection District in Boulder County
On Monday, June 11, the Sugarloaf Fire Protection District received additional PFAS sampling results. Only one of the twelve homes nearest Fire Stations 1 and 2 tested above the EPA Health Advisories for PFOA and PFOS. Sugarloaf is coordinating with Boulder County and CDPHE to determine where additional sampling is needed to determine risk. Boulder County has funded sampling private wells to date but expects to request support from CDPHE and EPA for future testing due to the high costs per sample. Sugarloaf is holding a board meeting on Tuesday, June 19, that is open to the public. Boulder County, CDPHE, and EPA will attend to help answer any questions.

Region 8 issued two SDWA Emergency Administrative Orders to the Blackfeet Tribe
On June 7, 2018, EPA issued two EAOs in response to potential imminent and substantial endangerment at Bedrock Babb Water System (serves 60 residents) and Starr School Water System (serves 175 residents) located on the Blackfeet Indian Reservation in Montana. Both systems lost pressure when they ran out of water due to mechanical problems. Loss of pressure in a drinking water distribution system may cause back siphoning which can allow disease causing organisms to enter the distribution system. The Systems issued public notice (boil water advisory) and are in the process of performing corrective actions.

Region 8 Issued a SDWA Emergency Administrative Order (EAO) to Town of Cokeville in Lincoln County
On June 13, 2018, EPA issued an EAO in response to a potential imminent and substantial endangerment at the Town of Cokeville public water system located in Wyoming. The System, currently serving 535 residents, had an E. coli maximum contaminant exceedance. Prior to order issuance, EPA consulted with OECA, Wyoming DEQ and Department of Health. The State of Wyoming does not have primacy for the drinking water program.

Upcoming Major Decisions and Events

None

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Region 9

Hot Topics

Excelsior Mining UIC Permit: Next week, we'll make a final permit decision on Excelsior Mining's Class III UIC permit for the Gunnison Copper Project in Cochise County, Arizona. The permit will authorize a 20+ year commercial-scale copper solution mining project involving 1,400 injection and recovery wells, and numerous wells for hydraulic control, monitoring, and compliance assurance. We have worked closely with the Arizona Dept. of Environmental Quality to coordinate regulatory requirements for the project, which is also permitted by their Aquifer Protection Program.

PFOS Discussion with Guam EPA: We will meet with Guam EPA Administrator Walter Leon-Guerrero regarding roles and responsibilities for treatment of wells contaminated with perfluorooctanesulfonic acid (PFOS) located close to the former Department of Defense Naval Air Station Agana.

Audit of California's Class II UIC Program: The Ground Water Protection Council (a nonprofit whose members are state groundwater regulatory agencies) will audit the California UIC program. The GWPC routinely conducts these Class II audits for states who request it. We will participate as an observer at the request of the state and the council.

Navajo Abandoned Uranium Mines: We are using the EPA Airborne Spectral Photometric Environmental Collection Technology (ASPECT) airplane to complete radiological surveys of approximately 130 Navajo Nation abandoned mines. These surveys will help us assess where further investigations are needed. EPA's Radiological Emergency Response Team (RERT) will provide field support for in situ field correlations. There will be two community events for the public to see the ASPECT airplane on the ground, in Gallup and Tuba City.

Denial of Entry (Engine Imports): We recommended the Bureau of Customs and Border Protection (CBP) seize or export 800 bicycle engine kits imported by "Used Car Factory" through the Port of Long Beach. Based on our physical examination, Used Car Factory violated the Clean Air Act, as the engines lack a valid Certificate of Conformity and are uncertified. As this is our first recommended seizure or denial of entry for "Used Car Factory," we'll proceed with an Expedited Settlement Agreement (ESAs).

Mexican Border: RA Mike Stoker and Ken Wagner met with the Arizona Dept. of Environmental Quality and DOJ to discuss Nogales wastewater infrastructure. They also attended the Border 2020 Regional Arizona/Sonora workgroup meeting to discuss strategies to eliminate trans-boundary sewage flows.

Upcoming Major Decisions and Events

Pacific Islands Environment Directors Meeting: Next week, we will host senior managers from US-affiliated Pacific island environmental agencies for the biennial Pacific Islands Environment Directors meeting. Topics will include recycling and sustainable materials management, radon testing, information management, and leadership development. Regional Administrator Mike Stoker will provide opening comments.

Presenting PCB FAST to Chevron: On June 18, we will give a presentation to approximately 80 Chevron environmental managers worldwide on the PCB Facility Approval Streamlining Toolkit (PCB FAST), a process developed in Region 9 to speed the pace of PCB cleanups through a collaborative process. Over the past few years, we have worked with Chevron on a number of PCB cleanups. At Chevron's Birch Hills project, we used alternative remediation approaches that reduced the cost of disposal by $12.9 million, reduced CO2 emissions by over 22,000 tons, and reduced the project time by 9 months.

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Region 10

Hot Topics

Naval Air Station Whidbey Island to Use CERCLA Time Critical Removal Authority for PFOA/PFOS (WA): Region 10 recently sent a letter to NAS Whidbey Island documenting our disagreement with the Navy's decision to use a CERCLA ***Time Critical*** Removal Action to attach homes with PFOA/PFOS contaminated private well water to the municipal water system for the Town of Coupeville. EPA supports doing this via a ***Non-Time Critical*** Removal Action or interim Record of Decision, both of which allow for public input on the alternatives the Navy considered. We believe this is particularly important because the landowners will no longer be able to use their private wells and will have to pay monthly water bills following the hook up to the municipal water system.

Upcoming Major Decisions and Events

Western States/British Columbia Oil Spill Task Force and Clean Pacific Conference: From June 19 - 21, several members of Region 10's Emergency Management Program will participate in the CLEAN PACIFIC conference in Portland, Oregon. This conference brings together parties responsible for oil spill prevention and response operations in the Western United States and Canada to discuss best practices and build interagency relationships vital to a successful response. In conjunction with the conference, the Pacific States/British Columbia Oil Spill Task Force is holding its annual meeting with a focus on abandoned and derelict vessels and sharing best practices and lessons learned across the west coast. The Task Force is made up of representatives from the states of Hawaii, California, Oregon, Washington and Alaska and the Province of British Columbia to address common oil spill planning, prevention and response issues.

Region 10 to Issue City of Kendrick (ID) Wastewater Treatment Plant Permit: Region 10 plans to issue the final NPDES permit for the City of Kendrick Idaho's wastewater treatment plant by June 29th with an effective date of September 1, 2018. The City uses a lagoon system and disinfection by chlorine to treat wastewater before discharging to the Potlatch River near Kendrick, Idaho. Six miles from the City's outfall, the Potlatch joins the Clearwater River within the boundary of the Nez Perce Reservation. This permit includes a five year compliance schedule for new seasonal ammonia limits and a compliance schedule of 13 years to meet temperature effluent limits.

EPA Continues to Support Oregon's Response to Harmful Algal Blooms and Drinking Water Advisories: Region 8 has joined Region 10 and EPA Headquarters in supporting the City of Salem's response to harmful algal blooms at Detroit Lake by providing test kits and analytical support. Cyanotoxin concentrations have recently increased again in Detroit Lake. Although the most recent drinking water finished water samples have showed cyanotoxin concentrations below the health advisory values, there are still detections of cyanotoxins above the detection limit at certain locations. *The drinking water advisory remains in place while the city is working on adding new treatment, including powdered activated carbon at the plant intake, and while they consider re-imposing a recreational advisory.* The city has also purchased and will shortly put in place ELISA analysis at the plant to quickly analyze cyanotoxins as a potential early warning system. One outstanding technical question is the role of "top-spill" at the Detroit Dam in exporting cyanobacteria and/or toxins downstream to the plant intake. Since the advisory began, the Corps of Engineers delayed further top-spill, however, the spill likely to commence in the near future because it is mandated by the National Marine Fisheries Biological Opinion and is necessary to protect endangered salmonids.

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Office of Administration and Resources Management

Hot Topics

OARM Issues Notice of Suspension to Former Volkswagen Official

On June 7, 2018, the EPA Suspension and Debarment Official (SDO) issued a Notice of Suspension to Martin Winterkorn, the former CEO and Chairman of the Management Board of Volkswagen in Wolfsburg, Germany. The suspension is related to VW's emissions testing defeat device scheme, and is based on an indictment charging Mr. Winterkorn with one count of conspiracy, in violation of 18 U.S.C. § 371 (Conspiracy to Defraud the United States, to Commit Wire Fraud, and to Violate the Clean Air Act) and three counts of wire fraud, in violation of 18 U.S.C. § 1343 and 2. The suspension imposes an immediate exclusion from receiving federal contracts and covered transactions to protect the public interest pending completion of legal proceedings.

Employee Viewpoint Survey

As of the conclusion of the 2018 Employee Viewpoint Survey on June 13, EPA's final agency-wide response rate is 54%. Preliminary results indicate that the Office of General Counsel has the highest EPA headquarters response rate of 77% and Regions 8 and 10 have the highest regional response rate of 62.8%. The government-wide response rate is 34%.

Upcoming Major Decisions and Events

None

Office of Air and Radiation

Hot Topics

Tracking SIP Actions:

- Total Number of SIPs submitted to Regions in FY 2018: 214
- Total Number of SIP Submittals with Final Action taken by the Regions in FY 2018: 176
- Total Number of Pending SIPs: 763

Packages at OMB for Review:

- Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration (Proposed Rule)
- NESHAP: Surface Coating of Large Appliances; Printing, Coating, and Dyeing of Fabrics and Other Textiles; and Surface Coating of Metal Furniture RTR (Proposed Rule)
- Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes (Proposed Rule)
- Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020 (Proposed Rule)
- Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy (Proposed Rule)
- Light-Duty Vehicle GHG Program Technical Amendments (Proposed Rule)

Packages that will move soon to OMB for Review:

- Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits (Final Rule)
- Standards of Performances for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced Air Furnaces Amendments (Proposed Rule)
- Standards of Performances for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced Air Furnaces (ANPRM)
- Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements (Final Rule)
- Determination Regarding Good Neighbor Obligations for the 2008 NAAQS (Proposed Rule) – Signature needed by June 29

Packages that will move soon to Signature:

- Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (Withdrawal of Proposed Rule) – Note OAR is updating the package and will be submitting a new version to the 3rd floor soon
- Mercury and Air Toxics Standards (MATS) Electronic reporting Requirements (Final Rule)

Upcoming Major Decisions and Events

Public Hearing: On June 22nd, EPA will hold a public hearing here in Washington, DC, on its proposed denial of five petitions submitted under section 126 of the Clean Air Act. The state of Delaware submitted four of these petitions, and Maryland submitted one.

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Office of Chemical Safety and Pollution Prevention

IMPORTANT DEADLINES

Row	Determination Type	Pending on 6/12/2018	Determinations Completed[1] as 6/12/2018	Determinations Posted on the Website as of 6/12/2018[6]
1	# of "not likely" determinations	**1**	**124[4]**	**122[4]**
2	# of §5(e) Orders signed by both EPA and the submitter	-	**402**	**400**
3	# of §5(e) Orders signed by EPA and awaiting submitter signature	**43**	-	-
4	# of non-Order SNURs/"not likely" determinations	**0**	**0**	**0**
5	# of cases in post-FOCUS final determination development[5]	**316[3, 5]**	-	-
6	# of cases flagged for in-depth review	**42**	-	-
7	# of PMNs, SNUNs and MCANs awaiting FOCUS (within 90-day review)	**44**	-	-
8	# of LVE/LOREX exemption grants	-	**608**	**599**
9	# of LVE/LOREX exemption denials	-	**121**	**121**
10	**Total number of cases**	**446**	**1255**	-
11	Normal active workload for the New Chemicals Program	300	-	-
12	Number of cases undergoing testing or data development by submitter	72[3]	-	-
13	**Backlog[2]**	74	-	-

[1] "Determinations Completed" means that EPA has completed its reviews on these cases and that final determinations have been made by EPA under TSCA section 5(a)(3).

[2] (Total number of cases) – (Normal active workload for the New Chemicals Program) - (Number of cases undergoing testing or data development) = Backlog

[3] Of these cases, approximately 58 are "active" lung toxicity cases that are suspended while submitters either conduct or are deciding whether to conduct testing to develop data on pchem properties, exposures and toxicity.

[4] "Not Likely" determinations are not posted until the final signed determination document is prepared and has been shared with submitter.

[5] These cases are those for which Post-FOCUS work is underway to develop: not likely determinations; non-Order SNURS coupled with not likely determinations; or section 5(e) or 5(f) Orders. When the OPPT Office Director decides which of these regulatory paths to follow, the case is moved to: Row 3 when the section 5(e) or 5(f) Order is sent to the submitter for signature; Row 4 when the SNUR is published and the not likely determination document is signed; and Row 1 when the determination document is sent to the OPPT OD for signature.

[6] These are all only final determinations posted on the web: grants and denials.

Hot Topics

Second Anniversary of the Frank R. Lautenberg Chemical Safety for the 21st Century Act. On June 22, EPA will announce that it has met another set of milestones under the Toxics Substances Control Act, as amended by the Lautenberg Chemical Safety for the 21st Century Act. EPA will release guidance and policy on confidential business information, a strategy to reduce animal testing, and a final mercury inventory rule by the Act's June 22, 2018 deadlines.

Updating Hazard Standards to Reduce Exposures to Lead-Contaminated Household Dust. On June 22, EPA will announce a proposal to lower standards for lead in dust for floors and window sills. The new proposed standard for lead in dust for floors and window sills will be more protective and will be an important step to reduce lead exposure. These standards apply to most pre-1978 housing and child-occupied facilities, such as day care centers and kindergarten facilities.

Upcoming Major Decisions and Events

Strategy to reduce animal testing. On June 22, EPA will announce its Strategic Plan to reduce the use of vertebrate animals in chemical testing. The strategy promotes the development and implementation of alternative test methods and strategies to reduce, refine or replace vertebrate animal testing and incorporates input from public meetings and written comments.

Final rule on reporting mercury manufacture and imports. On June 22, EPA will announce its final rule setting forth reporting requirements for the TSCA Mercury Inventory. The information collected though the new reporting requirements will be used to develop future inventories of mercury and mercury-containing product supply, use, and trade in the United States.

CBI expanded access guidance. On June 22, EPA will announce guidance for state, tribal and local governments, medical personnel and emergency responders on sharing confidential business information (CBI). These guidance documents specify the process that will enable other governmental entities and medical personnel and emergency responders to request CBI information.

Unique identifiers policy. On June 22, EPA will announce a policy and procedures for assigning unique identifiers to allow the public to better track information on chemicals while protecting CBI. An identifier will be applied to a substance, whose identity is protected as CBI, as well as to other related information or submissions concerning the same substance. This will allow the public to connect information related to the same substance, even while the specific identity is protected as confidential.

Generic names guidance. On June 22, EPA will announce guidance on structurally descriptive generic names. This guidance will allow EPA to share more information with the public about the structure of substances while protecting the confidential elements of the substance's specific chemical identity. TSCA Submitters claiming the specific chemical identity of a chemical substance as CBI are required to supply a structurally descriptive generic name that can be disclosed to the public.

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Office of the Chief Financial Officer

Hot Topics

- On June 12, 2018, the Senate Appropriations Subcommittee on Interior, Environment and Related Agencies considered and reported the FY 2019 Appropriations Bill. Title II of the bill funds the EPA at $8.058 billion, which is $1.878 billion above the FY 2019 President's Budget request. Additionally, the Committee provided $766 million to the EPA separately designated for infrastructure investments to the states. Combined, the total agency funding agreed to by the Senate Subcommittee for FY 2019 is $8.824 billion, which equals the FY 2018 Enacted Budget and is $501 million higher in total than the House Appropriations Full Committee level of $8.323 billion.
- Yesterday (June 14), the Senate Full Committee considered and reported the subcommittee bill by a unanimous vote of 31-0. The Full Committee adopted a bipartisan manager's amendment package by unanimous consent. This amendment contained seven requirements affecting EPA. There was no change to the approved SAC Subcommittee funding levels.
- OCFO continues to coordinate with the agency to review responses to House Appropriations Committee's FY 2019 budget hearings Questions for the Record (QFRs). Only a few remain to be cleared by OMB. OCFO also is coordinating review of the SAC Hearing transcript and the SAC QFRs, the latter of which were received earlier this week.

Upcoming Major Decisions and Events

- The DA, COO, CFO and other senior leaders will attend the OMB/EPA Strategic Review meeting on June 19.
- OCFO is working with AO's OCI to address any senior leader comments due June 15 on materials for the FY 2018 second quarter Administrator's Quarterly Performance Review scheduled for June 19 (3:00-5:00 PM EDT) and includes AAs/DAAs and RAs/DRAs.
- As follow up to the DA briefing earlier this week on summer planning and budget sessions at the July Senior Leadership Council, the CFO will send invitations and supporting materials to the ECOS Officers and National Tribal Council Executive Committee members. Invitations are for individual sessions for ECOS officers and NTC EC members with the DA the morning of July 18 and a discussion with both groups and the SLC the afternoon of July 18 regarding strategies for implementing selected agency priorities. OCFO will continue to coordinate with OCIR and OITA.

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Office of Congressional and Intergovernmental Relations

Hot Topics

June 20 -- Senate Environment and Public Works Committee confirmation hearing for Peter Wright, nominee for Assistant Administrator for OLEM and Chad McIntosh, nominee for Assistant Administrator for OITA – 10am, 406 Dirksen Building

June 21 -- House Science Subcommittee on Environment will hold a hearing on: Background Ozone levels and International Transport of Ozone 10am, 2318 Rayburn **(No EPA Witness)** Witnesses include:

- **Ms. Diana Rath,** Executive Director, Alamo Area Council of Governments
- **Mr. Timothy Franquist**, Air Quality Division Director, Arizona Department of Environmental Quality
- **Dr. Elena Craft**, Senior Health Scientist, Environmental Defense Fund
- **Mr. Gregory Stella**, Senior Scientist, Alpine Geophysics

Upcoming Major Decisions and Events

- **Week of June 18 –** Senate Commerce TA on vessels discharge w/OW and OGC
- **June 22 –** Congressman Latta staff and HEC staff briefing on HABs in drinking water
- **June 25-26** – PFAS community engagement meeting in Exeter, NH w/OW, R1
- **June 26** – RPM Act discussion with HEC staff
- **June TBD –** Senator Baldwin staff call on PFAS actions w/OW
- **June TBD-** Congressman Doyle staff briefing re: PFAS actions
- **TBD** – Sen. Isakson (GA) staff briefing on new chemicals process w/OCSPP
- **TBD** – Appropriations staff briefing on PRIA fees w/OCSPP, OCFO
- **TBD** - SEPW/HEC staff briefing on TSCA first 10 chemical problem formulations w/ OSCPP
- **TBD**- Congressman Boyle (PA) staff briefing re: PFAS actions w/ OW
- **TBD**- Sen. Peters (MI) staff call on PFAS actions w/OW
- **TBD**- Cong. Joyce (OH) request to brief Mentor, OH officials on GLRI (incl. potential funding)

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Office of Enforcement and Compliance Assurance

Hot Topics

Settlement with New York City Housing Authority for Lead-Based Paint Violations
On June 11, 2018, the United States filed a Consent Decree to settle admitted violations by the New York City Housing Authority (NYCHA) of federal lead-based paint requirements, housing standards, and other laws. NYCHA is the largest Public Housing Agency in the United States. EPA and the U.S. Department of Housing (HUD) were plaintiffs to the case, which was prosecuted by DOJ's Assistant U.S. Attorney for the Southern District of New York. In the Consent Decree, NYCHA admitted and accepted responsibility for false statements to HUD regarding its compliance with federal laws; violation of federal lead-based paint requirements, including EPA's Renovation, Repair and Painting rule, and the Lead-Based Paint Disclosure Rule, and violation of housing standards related to pests, mold, heating and elevators. To date, 19 children associated with affected properties were diagnosed as having elevated blood-lead levels. Lead dust from disturbed lead based paint is the leading cause of childhood lead poisoning. The Consent Decree will be in effect at least 5 years and will remain in effect as long as needed. It includes the appointment of an independent monitor who will have authority to establish performance standards and action plans to ensure NYCHA's compliance with the applicable requirements. The City of New York also committed to provide $1 billion in additional funds to improve the affected properties over the first 4 years and $200 million each year thereafter that the decree remains in effect, for a minimum commitment of $1.2 billion. The settlement focuses on protecting human health and ensuring compliance and does not impose penalties for past violations.

Settlement with Jack Noble to Resolve Clean Water Act Violations
On June 11, 2018, DOJ and EPA lodged a consent decree with Humboldt County, California landowner, Jack Noble, to resolve violations of the Clean Water Act. Under the proposed settlement, Mr. Noble will remove concrete and other debris that he dumped into the Van Duzen River, create woody alcoves in the river for fish habitat, revegetate the banks to restore the river, and pay a civil penalty of $10,000.

Settlement with Decostar Industries to Resolve RCRA Hazardous Air Emission Violations
On June 12, 2018, EPA reached an administrative settlement with Decostar to resolve RCRA organic air violations. Under the settlement, the company is required to implement a leak detection and repair program and pay a $377,900 penalty. Decostar will also carry out a supplement environmental project to upgrade equipment upgrade at a cost $2.7 million. The steps that Decostar will take under the settlement will protect workers and the surrounding community and improve overall air quality.

Upcoming Major Decisions and Events

On June 15, 2018, EPA's investigative team for the VW criminal case will receive the Executive Office for U.S. Attorneys Directors Award for "Superior Performance by a Litigative Team."

On June 21, 2018, OECA AA Susan Bodine, R8 RA Doug Benevento, and Acting AAG for ENRD Jeff Woods will tour the Colorado Springs municipal separate storm sewer system and receiving waters.

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Office of Environmental Information

No Submission this week

Office of General Counsel

Hot Topics

- *State of Georgia v. Pruitt*, No. 15-cv-79 (S.D. Ga.). New development: On June 8, the court preliminarily enjoined the 2015 Rule defining "waters of the United States," finding that the plaintiff-States had demonstrated "a likelihood of success on their claims that the [2015 Rule] was promulgated in violation of the CWA and the APA," noting that the 2015 Rule appears to regulate waters that do not have an effect on the chemical, physical, and biological integrity of navigable waters and to not be a logical outgrowth of the proposed rule.

- *Nat'l Envtl. Dev. Ass'n Clean Air Project v. EPA*, No.16-1344 (D.C. Cir.). New development: On June 8, the court upheld EPA's 2016 amendments to the Regional Consistency Rule Regulations under the CAA, which provide that an EPA region need not seek concurrence from headquarters to take an action that is inconsistent with EPA's national policy when such inconsistency is required for the agency to act in accordance with a federal district or circuit court decision.

- *States of New York and Connecticut v. Pruitt*, No. 1:18-cv-00406-JGK (S.D.N.Y.). New development: On June 12, the court issued an opinion and order requiring EPA to fulfill its overdue nondiscretionary duty to act to fully resolve interstate transport obligations under the CAA Good Neighbor provision for the 2008 ozone NAAQS for five states (Illinois, Indiana, Michigan, Virginia, and West Virginia). As per the statement of undisputed facts jointly filed by EPA and the plaintiffs, the order requires EPA to sign and disseminate (e.g., via web posting) a proposal by June 29, 2018, and a final action by December 6, 2018.

- *Maryland v. Pruitt*, No. Civ-JKB-17-2939 (D. Md.). New development: On June 12, the court issued a memorandum opinion and order and opinion ordering EPA to rule by September 15, 2018 on Maryland's petition under Clean Air Act § 126, requesting EPA to find that emissions from 36 power plants in five upwind states significantly contribute to Maryland's nonattainment of the 2008 ozone NAAQS. Plaintiffs (Maryland and Chesapeake Bay Foundation) had requested a deadline of 60 days from the court's ruling; EPA had asked for December 31, 2018. EPA must hold a hearing and keep the record open for 30 days thereafter.

- *Waterkeeper Alliance et al. v. Pruitt*, No. 18-cv-3521 (N.D. Cal.). New development: On June 13, environmental plaintiffs filed a complaint challenging the Army Corps' and EPA's 2015 Rule defining "waters of the United States" and the agencies' February 2018 Applicability Rule, which added an applicability date to the 2015 Rule. Plaintiffs seek an order vacating the Applicability Rule and specific portions of the 2015 Rule, claiming that the rules' promulgation violated the CWA, APA, NEPA, and ESA.

Upcoming Major Decisions and Events

6/28 Motions hearing in *Lipton v. EPA*, FOIA lawsuit filed by New York Times alleging that EPA failed to respond to a FOIA request and to make records available that were requested three or more times (D.D.C.).

Office of International and Tribal Affairs

Hot Topics

EU Meeting on EPA's Formaldehyde Emissions Standards - The EU Ambassador to the U.S. and the Embassies of Spain and Italy requested a meeting with EPA to discuss their concerns regarding EPA's Formaldehyde Emission Standards for Composite Wood Products Rule (TSCA Title VI) which came into effect on June 1, 2018. EPA (OCSPP, OECA, OGC and OITA) and USTR met with the EU Delegation to discuss the new standards and compliance with the June 1 date. This meeting was held in advance of an upcoming WTO Technical Barriers to Trade Committee meeting next week. USTR thought EPA did an outstanding job of responding to the EU concerns and demonstrated a true willingness to be helpful and accommodating to EU industry (wherever possible within our authorities).

Australia Cooperation on Water – EPA (OW, ORD, OITA) met with the Australia's Department of Agriculture and Water Resources (DAWR) to discuss advancing water cooperation under our existing MOU with DAWR, which was renewed in 2016. In the meeting we shared best practices and challenges in the following areas: water infrastructure, water reuse, water security/resilience, water technology/innovation, water efficiency labeling, and water modeling. We agreed to identify a few priority areas for future cooperation under the MOU and exchange information in the other areas of interest.

EPA's American Indian and Alaskan Native Special Emphasis Program - OITA led a strategic planning workshop for EPA's American Indian and Alaskan Native Special Emphasis Program (AI/AN SEP) to review of EPA's *Diversity and Inclusion Strategic Plan (2017 - 2021)*, *Special Emphasis Program Managers Handbook (2018)*, and *FY 2017 Management Directive 1715 Report*. Attendees prepared a draft FY 2019 AI/AN Special Emphasis Program Strategic Plan, that includes a commitment to produce EPA recruitment materials targeting potential American Indian and Alaskan Native applicants, and profiling current AI/AN employees as examples of successful professionals across a broad range of job classifications and levels of seniority. The workshop was attended by staff from Regions 3, 5, 6, 8, and 10, OCR, OARM and OITA.

Upcoming Major Decisions and Events

North American Development Bank – The North American Development Bank will be meeting on June 18 and 19 in Mexico to discuss water infrastructure projects and the recent merger with the Border Environment Cooperation Committee. The U.S. Board members include representatives from Treasury, State Department and EPA (OITA PDAA).

Commission for Environmental Cooperation (CEC) Council Session – The CEC Council, consisting of the Environmental Ministers from the U.S., Canada, and Mexico, will be meeting on June 26 and 27 in Oklahoma City. The U.S. (EPA Administrator) is the chair of this year's Council Session, which will focus on "Partnerships and Innovation for Green Growth."

G7 Environmental Ministerial Preparation Meeting – EPA and State Department will be attending a G7 Environmental Ministerial preparatory meeting on June 28 and 29 in Montreal. Following guidance of the NSC, we will continue preparations on the three topics proposed by Canada - climate and clean growth, sustainable finance, and resource efficiency including marine litter.

Office of Land and Emergency Management

Hot Topics

Coal Combustion Residuals (CCR). (see below)

Clean Air Act 112(r) Risk Management Program (RMP) Reconsideration NPRM. A public hearing was held today, and approximately 50 people presented testimony at the hearing. Participants represented industry groups, environmental organizations, community groups, consulting firms, regulated facilities, and others. The public comment period ends July 30, 2018.

Ongoing major Superfund NPL sites (including Colorado Smelter, East Chicago, West Lake, Bonita Peak, Hudson River, Portland Harbor, Mississippi Phosphates, Oak Ridge, Edwards AFB, Berry's Creek, American Cyanamid).

CERCLA 108(b) Financial Assurance – Next Three Sectors. We are working with OGC, OP, and the AO to plan our approach to the next three sectors.

PFAS. We are working with ORD and OW to develop groundwater cleanup recommendations for PFOA and PFOS. OLEM is working with the AO, OGC, OECA and other AAships to look at available statutory mechanisms for PFOA and PFOS to be "hazardous substances" under CERCLA.

Emergency Response. The Environmental Response Team is working with Region 9 as part of the inter-governmental effort addressing volcano activity in Hawaii. Total current staffing is 23.

Upcoming Major Decisions and Events

BUILD Act. A notice to solicit comment on aspects of the BUILD Act was signed, and we anticipate FR publication by June 21.

Coal Combustion Residuals. The proposed rule is with OMB and we anticipate signature by June 25. We anticipate approval of Oklahoma's CCR permitting program the week of June 18. Georgia submitted its CCR permit program application to EPA. It is undergoing review.

E-Manifest Launch. We anticipate issuing a press release on June 29, for the launch on June 30.

Hazardous Waste Pharmaceuticals Final Rule. We briefed the DA today, and we anticipate the rule package going to OMB soon.

Hazardous Substances Spill Prevention Proposed Rule. We are working toward OMB clearance to allow for signature by June 15.

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Office of Policy

Hot Topics:

Number of Actions to OFR this Year:

- Signed by Regions:
  - Notices: 45
  - Proposed Rules: 134
  - Direct Final Rules: 9
  - Withdrawal of Proposed Rule: 1
  - Withdrawal of Direct Final: 4
  - Final Rules: 106
- Signed by HQ:
  - Notices: 222
  - Proposed Rules: 37
  - NPRM Extension: 1
  - Withdrawal of Direct Final: 1
  - Interim Final: 1
  - Final Rules: 67

Number of Actions to OFR this Week (June 8 – June 14):

- Signed by Regions:
  - Notices: 1
  - Proposed Rules: 10
  - Direct Final Rules: 1
  - Withdrawal of Proposed Rule: 0
  - Withdrawal of Direct Final: 0
  - Final Rules: 3
- Signed by HQ:
  - Notices: 10
  - Proposed Rules: 4
  - NPRM Extension: 0
  - Withdrawal of Direct Final: 0
  - Interim Final: 0
  - Final Rules: 1

Active Interagency Reviews from OMB	
Title	**OMB Due Date**
HHS FRM: "Federal Policy for the Protection of Human Subjects: Six Month Delay of the General Compliance Date of Revisions While Allowing the Use of Three Burden-Reducing Provisions During the Delay Period" (a.k.a. Common Rule Delay)	06/13/2018

Documents Submitted to OFR from June 6 - 12, 2018		
FRL	**Title**	**Date Submitted to OFR**
9979-53-OW	Announcement of the Per- and Polyfluoroalkyl Substances (PFAS) New England Community Engagement	6/12/2018
9979-49-Region 9	Approval and Promulgation of Air Quality Implementation Plans; Arizona; Nonattainment Plan for the Miami SO2 Nonattainment Area	6/12/2018
9979-47-OAR	Proposed Information Collection Request; Comment Request; Fuel Use Requirements for Great Lake Steamships (Renewal)	6/12/2018
9979-07-Region 1	Air Plan Approval; Maine; Infrastructure State Implementation Plan Requirements	6/12/2018
9978-97-Region 1	Air Plan Approval; Connecticut; Prevention of Significant Deterioration; Revisions to the Prevention of Significant Deterioration Greenhouse Gas Permitting Authority	6/12/2018
9979-39-Region 3	Approval and Promulgation of Air Quality Implementation Plans; West Virginia; Regional Haze Plan and Visibility Requirements for the 2010 Sulfur Dioxide and the 2012 Fine Particulate Matter Standards	6/11/2018
9979-33-OAR	Relaxation of the Federal Reid Vapor Pressure (RVP) Gasoline Volatility Standard for Baton Rouge, Louisiana	6/11/2018
9979-32-Region 5	Wisconsin Regional Haze 5-year Progress Report	6/11/2018
9979-26-OCSPP	Agency Information Collection Activities; Pre-Manufacture Review Reporting and Exemption Requirements for New Chemical Substances and Significant New Use Reporting Requirements for Chemical Substances; Emergency Processing Request Submitted to OMB	6/11/2018
9979-12-Region 10	Approval of the Application by the State of Idaho to Administer the National Pollutant Discharge Elimination System (NPDES) and Electronic Reporting	6/11/2018
9979-03-OEI	Cross-State Air Pollution Rule and Texas SO2 Trading Programs (Renewal)/ICR No.2391.05	6/11/2018
9978-55-OCSPP	Ortho-Phthalaldehyde; Receipt of Application for Emergency Exemption, Solicitation of Public Comment	6/11/2018

9978-41-OCSPP	Receipt of Several Pesticide Petitions Filed for Residues of Pesticide Chemicals in or on Various Commodities	6/11/2018
9978-37-OCSPP	Difenacoum; Notice of Receipt of Requests to Voluntarily Cancel Certain Pesticide Registrations	6/11/2018
9978-34-OCSPP	Pesticide Product Registration; Receipt of Applications for New Active Ingredients	6/11/2018
9978-29-OCSPP	Receipt of Several Pesticide Petitions Filed for Residues of Pesticide Chemicals in or on Various Commodities	6/11/2018
9977-75-OCSPP	Extract of Swinglea Glutinosa; Exemption from the Requirement of a Tolerance	6/11/2018
9979-42-Region 3	Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Interstate Transport Requirements for the 2012 Fine Particulate Matter Standard	6/8/2018
9979-41-OP	Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process	6/8/2018
9979-34-Region 9	Approval of Air Plan Revisions; Approvals and Promulgations: California; Placer County Air Pollution Control District; Stationary Source Permits	6/8/2018
9977-78-OCSPP	Notification of Submission to the Secretary of Agriculture; Harmonize 40 CFR 26 Subparts C, D, and K with Subpart A (the Common Rule)	6/8/2018
9979-44-Region 3	Removal of Pennsylvania Gasoline Volatility Requirements for the Pittsburgh-Beaver Valley Area	6/8/2018
9979-43-Region 3	Removal of Pennsylvania Gasoline Volatility Requirements for the Pittsburgh-Beaver Valley Area	6/8/2018
9979-22-OARM	Proposed Information Collection Request; Comment Request; Monthly Progress Reports (Renewal)	6/8/2018
9979-21-Region 3	National Oil and Hazardous Substances Pollution Contingency Plan; National Priorities List: Deletion of the Ordnance Works Disposal Areas Superfund Site	6/8/2018
9979-16-OCSPP	Addition of Nonylphenol Ethoxylates Category; Community Right-to-Know Toxic Chemical Release Reporting	6/7/2018
9978-76-OCSPP	Asbestos; Significant New Use Rule	6/6/2018
9978-40-OCSPP	Problem Formulations for the Risk Evaluations to be Conducted under the Toxic Substances Control Act, and Application of Systematic Review in TSCA Risk Evaluations; Notice of Availability	6/6/2018

9979-19-OAR	Response to Clean Air Act Section 126(b) Petitions from Delaware and Maryland; Public Hearing	6/6/2018
9979-06-Region 3	District of Columbia: Proposed Authorization of District Hazardous Waste Management Program Revisions	6/6/2018
9979-08-Region 6	Underground Injection Control Program; Hazardous Waste Injection Restrictions; Petition for Exemption Reissuance - Class I Hazardous Waste Injection; U. S. Ecology Texas (USET) Robstown, Texas	6/6/2018
9978-99-OLEM	Proposed Information Collection Request; Comment Request; Trade Secrets Claims under the Emergency Planning and Community Right-to-Know Information	6/6/2018

Upcoming Major Decisions or Events

Preparedness and Recovery Webinar. On June 21, EPA will host a webinar co-produced by the Office of Environmental Justice to share information on legal requirements and practices that can help ensure the protection of first responders and communities affected by disasters.

Office of Research and Development

Hot Topics

PFAS ECOS Call

On June 20, ORD is coordinating the ECOS-EPA PFAS call. The purpose of this bimonthly call is for EPA and state partners to share information on PFAS-related science and technical activities. Agenda topics include an update on state-level risk communication of PFAS contamination, MassDEP drinking water guidelines for five PFAS chemicals, a recap from EPA's PFAS National Leadership Summit and next steps, and EPA ORD efforts on evaluating PFAS treatment performance and cost.

ISA Update

On June 15th, ORD anticipates releasing the "Second External Review Draft Integrated Science Assessment for Oxides of Nitrogen, Oxides of Sulfur, and Particulate Matter – Ecological Criteria" for public comment and external peer review. This ISA is part of the review of the secondary (welfare-based) National Ambient Air Quality Standards (NAAQS) for these pollutants. This draft ISA will be reviewed by a panel of the Clean Air Scientific Advisory Committee (CASAC) at a public meeting scheduled for September 5-6, 2018.

Upcoming Major Decisions and Events

Next week, New England state commissioners and staff will visit ORD's Atlantic Ecology Division. Participating states include CT, MA, ME, NH, RI and VT, as well as Regional Administrator Alexandra Dunn and Deputy Regional Administrator Deb Szaro. The visit will provide an opportunity for Region 1 states to learn more about EPA ORD science and technical capabilities, meet ORD scientists and see first-hand some of the innovative work being done by ORD researchers. This visit will include a lab tour and presentations focused on topics of interest to New England states including nutrients, algal blooms, PFAS, coastal resilience as well as an overview of EPA's Chemistry Dashboard.

Nutrients Visioneering Meeting

On June 19th, ORD and OW will participate in a nutrients visioneering meeting in Woods Hole, MA. The meeting, hosted by the Challenging Nutrients Coalition, will bring together bold thinkers to generate new ideas for addressing excess nitrogen and phosphorus in our nation's waterways. The Challenging Nutrients Coalition is a group of federal agencies, universities, and non-profit organizations committed to working together to foster innovative science and technology solutions for addressing excess nitrogen and phosphorus in our nation's waters. The discussions and concepts generated during the visioneering meeting will be used to help inform the next set of challenges and initiatives for the Coalition.

Implementation of EPA's Plan to Increase Access to Results of EPA-Funded Scientific Research

During the week of June 18th, EPA will release *Implementation of EPA's Plan to Increase Access to Results of EPA-Funded Scientific Research* - A Report to Congress – 2018. The report is in response to Congressional language in the 2018 Omnibus Appropriations.

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Office of Water

Hot Topics

Beaches Environmental Assessment and Coastal Health (BEACH) Act Report to Congress: This week, OW sent forward to OP the BEACH Act Report to Congress for OMB review. The BEACH Act of 2000 directs the EPA to submit a report every four years. The last report submitted to Congress, however, was in 2006. In response to the OIG's finding that the EPA did not meet this statutory obligation, the Agency committed to submit this final report to Congress by August 15, 2018, as part of our corrective action. This final report relies heavily on the recently released *2017 Five-Year Review of the 2012 Recreational Water Quality Criteria* and the Agency's beach program website.

Alaska Mitigation Memorandum of Agreement (MOA): This week, the EPA and Department of Army signed a joint MOA on Alaska Mitigation. The MOA updates and replaces the 1994 Alaska Mitigation Memorandum. Next week, Lee Forsgren and Army leadership will travel to Alaska to hold listening sessions on the revised MOA with local stakeholders, including other federal and state agencies, tribal representatives, and industry. The last stakeholder session will be open to the press.

Upcoming Major Decisions and Events

WIFIA: Next week, the EPA anticipates closing the 2nd WIFIA loan to the City of Omaha in the amount of $69.7 million for the construction of a retention treatment basin to address combined sewer overflows in the Saddle Creek Basin as required by the city's consent decree, Clean Water Act permit, and long-term control plan. This project will address water quality concerns in Papillion Creek and the Missouri River by removing an estimated 1.2 billion gallons of combined sewage discharge into the Little Papillion Creek, and removing floatables and other solids from combined sewer overflows. We anticipate sending the loan approval package for the Administrator's signature early next week.

Waterkeeper II Steam Electric FOIA: Next week, the EPA anticipates issuing the final production for this FOIA, pursuant to court order.

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Message

From: Hanley, Mary [Hanley.Mary@epa.gov]
Sent: 7/10/2018 7:14:00 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]
Subject: OPPT Actions for General
Attachments: OPPT ACTION ITEMS CHART as of 07.10.18.docx

Hi,
Attached please find my list of OPPT action items, etc. As always, please let me know if you would like me to add or revise anything. This will be in your folders for tomorrow.
Cheers
M