

human health, and agricultural advocates, pesticide users, and members of the public interested in the use of pesticides. This listing is not intended to be exhaustive but rather provides a guide for readers regarding entities likely to be affected by his action. Because others may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

## II. What action is the Agency taking?

EPA requests public comment on a petition received from PEER and ABC that asks EPA to take the following actions:

- Amend 40 CFR 158.400(e)(1) to require the submission of product performance data for neonicotinoid and other systemic insecticides, and
- Amend 40 CFR 158.400(e)(1) to require that, if not already submitted to the Agency, existing registrants of a neonicotinoid or other systemic insecticides submit efficacy within 180 days of the promulgation of the rule.

A copy of the petition is available in the docket.

## III. What should I consider as I prepare my comments for EPA?

### A. Submitting CBI

Do not submit Confidential Business Information (CBI) to EPA through *regulations.gov* or email. Clearly mark the part or all of the information that you claim to be 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.

### B. Multimedia Submissions

Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system).

### C. Tips for Preparing Your Comments

When preparing and submitting your comments, see the commenting tips at <https://www.epa.gov/dockets/commenting-epa-dockets>. Please note that once submitted, comments cannot be edited or removed from the docket. EPA may publish any comment received to its public docket.

**Authority:** 7 U.S.C. 136 *et seq.*

Dated: November 16, 2023.

**Michal Freedhoff,**

*Assistant Administrator, Office of Chemical Safety and Pollution Prevention.*

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 751

**[EPA–HQ–OPPT–2023–0376; FRL–9145–01–OCSPF]**

**RIN 2070–AL02**

### **Decabromodiphenyl Ether and Phenol, Isopropylated Phosphate (3:1); Revision to the Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under the Toxic Substances Control Act (TSCA)**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing revisions to the regulations for decabromodiphenyl ether (decaBDE) and phenol, isopropylated phosphate (3:1) (PIP (3:1)), two of the five persistent, bioaccumulative, and toxic (PBT) chemicals addressed in final rules issued under the Toxic Substances Control Act (TSCA) in January 2021. After receiving additional comments following the issuance of the 2021 PBT final rules, the Agency has determined that revisions to the decaBDE and PIP (3:1) regulations are necessary to address implementation issues and to reduce further exposures. As required under TSCA, these proposed requirements would, if finalized, reduce the potential for exposures to humans and the environment to decaBDE and PIP (3:1) to the extent practicable. The Agency is not proposing to revise the existing regulations for the other three PBT chemicals (2,4,6-TTBP, HCBP, and PCTP) at this time.

**DATES:** Comments must be received on or before January 8, 2024.

**ADDRESSES:** Submit your comments, identified by docket identification (ID) number EPA–HQ–OPPT–2023–0376, through <https://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. Additional instructions on commenting and visiting the docket, along with more

information about dockets generally, is available at <https://www.epa.gov/dockets>.

### **FOR FURTHER INFORMATION CONTACT:**

*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](mailto:TSCA-Hotline@epa.gov).

*For technical information regarding decaBDE, contact:* Brooke Porter, Existing Chemicals Risk Management Division (7404M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460–0001; telephone number: (202) 564–6388; email address: [porter.brooke@epa.gov](mailto:porter.brooke@epa.gov).

*For technical information regarding PIP (3:1), contact:* Scott Drewes, Existing Chemicals Risk Management Division (7404M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460–0001; telephone number: (202) 564–8833; email address: [drewes.scott@epa.gov](mailto:drewes.scott@epa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **I. Executive Summary**

##### *A. Does this action apply to me?*

You may be affected by this action if you manufacture (including import), process, distribute in commerce, or use decaBDE or decaBDE-containing products or articles. Such uses for decaBDE may include but are not limited to wire and cable insulation for nuclear power generation facilities, plastic shipping pallets, and imported articles such as replacement parts for aerospace and automotive parts. You may also be affected by this action if you manufacture (including import), process, distribute in commerce, or use PIP (3:1) or PIP (3:1)-containing products or articles. Such uses for PIP (3:1) may include flame retardants in plastics, functional fluids in aerospace and industrial machinery, and plastic articles that are components of electronics or electrical articles.

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:

- Adhesive Manufacturing (NAICS Code 325520);
- Air and Gas Compressor Manufacturing (NAICS Code 333912);
- Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing (NAICS Code 333415);

- Aircraft Engine and Engine Parts Manufacturing (NAICS Code 336412);
- Aircraft Manufacturing (NAICS Code 336411);
- All Other Basic Organic Chemical Manufacturing (NAICS Code 325199);
- All Other Miscellaneous General Purpose Machinery Manufacturing (NAICS Code 333998);
- All Other Plastics Product Manufacturing (NAICS Code 326199);
- All Other Transportation Equipment Manufacturing (NAICS Code 336999);
- Analytical Laboratory Instrument Manufacturing (NAICS Code 334516);
- Appliance Repair and Maintenance (NAICS Code 811412);
- Audio and Video Equipment Manufacturing (NAICS Code 334310);
- Automobile and Light Duty Motor Vehicle Manufacturing (NAICS Code 336110);
- Automobile and Other Motor Vehicle Merchant Wholesalers (NAICS Code 423110);
- Boat Building (NAICS Code 336612);
- Broadwoven Fabric Mills (NAICS Code 313210);
- Computer and Computer Peripheral Equipment and Software Merchant Wholesalers (NAICS Code 432430);
- Computer Storage Device Manufacturing (NAICS Code 334112);
- Construction Machinery Manufacturing (NAICS Code 333120);
- Current-Carrying Wiring Device Manufacturing (NAICS Code 335931);
- Custom Compounding of Purchased Resins (NAICS Code 325991);
- Electronic Computer Manufacturing (NAICS Code 334111);
- Farm and Garden Machinery and Equipment Merchant Wholesalers (NAICS Code 423820);
- Farm Machinery and Equipment Manufacturing (NAICS Code 333111);
- Guided Missile and Space Vehicle Manufacturing (NAICS Code 336414);
- Guided Missile and Space Vehicle Propulsion Unit Parts Manufacturing (NAICS Code 336415);
- Heavy Duty Truck Manufacturing (NAICS Code 336120);
- Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers (NAICS Code 423620);
- Industrial Machinery and Equipment Merchant Wholesalers (NAICS Code 423830);
- Industrial Supplies Merchant Wholesalers (NAICS Code 423840);
- Industrial Truck, Tractor, Trailer and Stacker Machinery Manufacturing (NAICS Code 333924);
- Instruments and Related Products Manufacturing for Measuring,

- Displaying, and Controlling Industrial Process Variables (NAICS 334513);
- Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing (NAICS Code 333112);
- Manufacturing and Reproducing Magnetic and Optical Media (NAICS Code 334610);
- Materials Recovery Facilities (NAICS Code 562920);
- Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers (NAICS Code 423450);
- Mining Machinery and Equipment Manufacturing (NAICS Code 333131);
- Miscellaneous Intermediation (NAICS Code 523910);
- Motor and Generator Manufacturing (NAICS Code 335312);
- Motor Vehicle Body Manufacturing (NAICS Code 336211);
- Motor Vehicle Electrical and Electronic Equipment Manufacturing (NAICS Code 336320);
- Motor Vehicle Gasoline Engine and Engine Parts Manufacturing (NAICS Code 336310);
- Motor Vehicle Supplies and New Parts Merchant Wholesalers (NAICS Code 423120);
- Motorcycle, Bicycle and Parts Manufacturing (NAICS Code 336991);
- New Car Dealers (NAICS Code 441110);
- Nuclear Electric Power Generation (NAICS Code 221113);
- Other Aircraft Part and Auxiliary Equipment Manufacturing (NAICS Code 336413);
- Other Basic Inorganic Chemical Manufacturing (NAICS Code 325180);
- Other Chemical and Allied Products Merchant Wholesalers (NAICS Code 424690);
- Other Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS Code 532490);
- Other Communications and Energy Wire Manufacturing (NAICS Code 335929);
- Other Communications Equipment Manufacturing (NAICS Code 334290);
- Other Electronic Component Manufacturing (NAICS Code 334419);
- Other Electronic Parts and Equipment Merchant Wholesalers (NAICS Code 432690);
- Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing (NAICS Code 336419);
- Other Motor Vehicle Parts Manufacturing (NAICS Code 336390);
- Paint and Coating Manufacturing (NAICS Code 325510);
- Petroleum Lubricating Oil and Grease Manufacturing (324191);
- Petroleum Refineries (NAICS Code 324110);
- Plastics Material and Resin Manufacturing (NAICS Code 325211);

- Plastics Product Manufacturing (NAICS Code 3261);
- Plumbing, Heating, and Air-Conditioning Contractors (NAICS Code 238220);
- Relay and Industrial Control Manufacturing (NAICS Code 335314);
- Semiconductor and Related Device Manufacturing (NAICS Code 334413);
- Semiconductor Machinery Manufacturing (NAICS Code 333242);
- Surface Active Agency Manufacturing (NAICS Code 325613);
- and
- Surgical Appliance and Supplies Manufacturing (NAICS Code 339113).

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?*

TSCA section 6(h), 15 U.S.C. 2601 *et seq.*, directs EPA to take expedited action to complete TSCA section 6(a) rules on certain PBT chemical substances. EPA must apply one or more of the requirements listed in TSCA section 6(a) to the extent necessary to meet the TSCA section 6(h)(4) statutory standard. More specifically, EPA must take action on those chemical substances identified in the 2014 Update to the TSCA Work Plan for Chemical Assessments (Ref. 1) that, among other factors, EPA has a reasonable basis to conclude are toxic and that with respect to persistence and bioaccumulation score high for one and either high or moderate for the other, pursuant to the TSCA Work Plan Chemicals: Methods Document (Ref. 2).

In response to this directive, in January 2021, EPA promulgated five rules to regulate the following five PBT chemical substances: decaBDE; PIP (3:1); 2,4,6-TTBP (CASRN 732-26-3); HCBP (CASRN 87-68-3); and PCTP (CASRN 133-49-3) (Refs. 3, 4, 5, 6, and 7). With the obligation to promulgate these rules, the Agency also has the authority to amend them (*e.g.*, if circumstances change, including in relation to the receipt of new information). It is well settled that EPA has inherent authority to reconsider, revise, or repeal past decisions to the extent permitted by law so long as the Agency provides a reasoned explanation. See *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). Based on information submitted by regulated entities since the publication of the 2021 decaBDE and PIP (3:1) final rules, the Agency has determined that amendments to both rules are necessary to address

implementation issues and to further reduce exposure to these chemical substances to the extent practicable.

### C. What action is the Agency taking?

EPA is proposing revisions to the 2021 decaBDE and PIP (3:1) final rules under TSCA. EPA is not proposing revisions to the other three PBT rules issued under TSCA section 6(h) for 2,4,6-TTBP, HCB, and PCTP at this time.

#### 1. Decabromodiphenyl ether (decaBDE).

DecaBDE is a flame retardant that has been widely used in textiles, plastics, adhesives, and polyurethane foam. In this action, EPA is proposing revisions to the 2021 final rule to require the use of personal protective equipment (PPE) during certain domestic manufacturing and processing of decaBDE and decaBDE-containing products and articles and to require a label on plastic shipping pallets that are known to contain decaBDE. EPA is also proposing to prohibit releases to water from manufacturing, processing, and distribution in commerce of decaBDE. EPA is proposing to extend the compliance date for the phase-out of processing and distribution in commerce of decaBDE-containing wire and cable insulation for nuclear power generation facilities and is proposing to add an export notification requirement for decaBDE-containing wire and cable for nuclear power generation facilities. These proposed revisions are discussed further in Unit III.D.

#### 2. Phenol, isopropylated phosphate (3:1) (PIP (3:1)).

PIP (3:1) is a flame retardant, a plasticizer, and an anti-compressibility and anti-wear additive. It is used in lubricants and hydraulic fluids and in the manufacture of other compounds. For PIP (3:1), EPA is proposing revisions to the 2021 final rule to require the use of PPE for the domestic manufacturing and processing of PIP (3:1) and certain PIP (3:1)-containing products and articles, and to phase-in prohibitions on processing and distribution for certain uses. EPA is also proposing to add new exclusions from the prohibitions on processing and distribution in commerce of PIP (3:1) for use in wire harnesses and electric circuit boards and the processing and distribution in commerce of such PIP (3:1)-containing harnesses and circuit boards. EPA also is proposing a new 5-year compliance timeframe for the prohibition of processing and distribution in commerce of PIP (3:1), so that it may be used as an ingredient of a pesticide product (*i.e.*, a pesticide product registered under the Federal Insecticide,

Fungicide, and Rodenticide Act (FIFRA) for use in anti-fouling paint). EPA is not proposing to revise the October 2024 compliance date for articles not otherwise covered by an exclusion from prohibition or by an existing or newly proposed extension to a phase-out compliance deadline.

### D. Why is the Agency taking this action?

In accordance with the Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis," (86 FR 7037, January 25, 2021), on September 3, 2021, EPA announced its intention to review the five PBT final rules issued on January 6, 2021. The Agency planned to determine whether the rules were consistent with the Administration's policy to limit exposure to dangerous chemicals and to identify additional actions that could be taken to address implementation issues and to reduce further exposures to these PBT chemicals to the extent practicable, as directed by TSCA section 6(h). At that time, EPA also requested public comment in the **Federal Register** on the five 2021 PBT final rules (Refs. 8 and 9). In particular, EPA sought comment on whether the rules sufficiently reduced exposures to these chemicals, including exposures to potentially exposed or susceptible subpopulations and the environment; on implementation issues associated with the 2021 PBT final rules; on compliance issues associated with the 2021 PBT final rules; and on whether to consider additional or alternative regulatory measures or approaches.

In 2021, shortly after the PBT final rules were published, numerous stakeholders, including, for example, the electronics and electrical manufacturing sector and their customers, raised significant concerns about their ability to meet the March 8, 2021, compliance date for the processing and distribution of PIP (3:1) and PIP (3:1)-containing articles (Ref. 10). In response to stakeholder input, in an immediately effective final rule in September 2021, EPA extended the compliance deadline for processing and distribution in commerce of PIP (3:1) for use in articles and PIP (3:1)-containing articles, unless subject to an exclusion from or phase-in of prohibition, to March 8, 2022 (Ref. 11). In October 2021, EPA proposed a new extended compliance deadline for processing and distribution in commerce of PIP (3:1) for use in articles and PIP (3:1)-containing articles, unless subject to an exclusion from or phase-in of prohibition, to October 31, 2024, and finalized that extended compliance deadline in March

2022 (Refs. 12 and 13). EPA similarly amended the compliance deadline for recordkeeping requirements for articles in those rulemakings. Additionally, EPA responded to the comments received on the March 2021 notification that were relevant to the PIP (3:1) compliance deadline extension and related issues when the Agency extended the compliance deadlines, in both the September 2021 PIP (3:1) final rule and in an October 2021 PIP (3:1) proposed rule (Refs. 11 and 12). EPA reasoned that these extensions would avoid significant disruption in the supply chains for certain articles necessary to the electronics and electrical manufacturing sector, while EPA determined whether any further compliance date extensions are necessary for certain industry sectors, including the semiconductor and manufacture equipment.

EPA also announced in the September 2021 PIP (3:1) final rule, October 2021 PIP (3:1) proposed rule, and the March 2022 PIP (3:1) final rule that the Agency intended to consider any additional information received to further reduce exposures and promote environmental justice to better protect human health and the environment (Refs. 11, 12, and 13).

### E. What are the estimated incremental impacts of this action?

EPA's Economic Analysis of the estimated impacts with this rulemaking can be found in the rulemaking docket (Ref. 14). As described in more detail in the Economic Analysis in Unit IV. and is briefly summarized here.

#### 1. Benefits

While EPA was not able to quantify the benefits of reducing human and environmental exposures to decaBDE or PIP (3:1), the Economic Analysis qualitatively discusses the benefits of reducing exposure under this proposed rule, as summarized in Unit IV (Ref. 14). As discussed in the 2021 PBT final rules, and in Unit II.A., and consistent with TSCA section 6(h)(2), EPA did not perform a risk evaluation for decaBDE or PIP (3:1), nor did EPA develop quantitative risk estimates.

#### 2. Costs

Total quantified annualized social costs for this proposed rule are approximately \$389 million at a 3% discount rates, and \$416 million at a 7% discount rate. Of the proposed rule costs, those associated with decaBDE alone were estimated at \$1,700 at a 3% discount rate and \$1,800 at a 7% discount rate. Costs associated with PIP (3:1) were estimated \$389 million and

\$416 million (at 3 and 7% discount rates, respectively.)

### 3. Small Entity Impacts

This proposed rule, if finalized, would impact approximately 16,205 small businesses, all of which pertained to PIP (3:1) and none for decaBDE. Of these, 1,399 are expected to incur cost impacts between 1% and 3% of their annual revenue. No entities are expected to be impacted above 3% of their annual revenue.

### 4. Environmental Justice

Since a risk evaluation was not conducted, EPA's understanding of the extent to which reductions in exposure might reduce risks for communities with Environmental Justice (EJ) concerns is limited. In the Economic Analysis accompanying this rule (Ref 14), EPA relied on available relevant data sources for PIP (3:1) and decaBDE, including the U.S. EPA's CDR, the ToxicsStatistics, and others to assess the economic implications of the proposed rule. Data, however, are not sufficiently comprehensive to estimate the extent to which the proposed rule would reduce existing disproportionate impacts on communities with EJ concerns. In addition, only a small subset of the specific facilities (14 facilities reported to 2020 CDR) using decaBDE and PIP (3:1) have been identified, so a proximity analysis examining the characteristics of the communities surrounding the known facilities would not be representative of all exposed communities.

Given the lack of available data, EPA believes that it is not practicable to assess whether this action is likely to result in new disproportionate impacts or exacerbate any existing disproportionate impacts on communities with EJ concerns. EPA also believes that the restrictions placed on decaBDE and PIP (3:1) through this proposed rule would reduce the potential exposures and risks associated with the manufacture, processing, and use of these chemicals. At a minimum EPA believes this proposed rule would not exacerbate any baseline environmental justice concerns and would increase the level of protection for all affected populations without having any disproportionate and adverse human health or environmental effects on any population, including children. Certain exclusions from prohibition and extensions of compliance dates beyond those adopted in the 2021 PBT final rules, however, may partially delay anticipated reductions in exposure.

### 5. Children's Environmental Health

Under the *2021 EPA Policy on Children's Health*, the Agency considers the risks to infants and children consistently and explicitly during its decision-making process (Ref. 15). This proposed rule, if finalized, would reduce the potential exposures to decaBDE and PIP (3:1) that could occur from activities that would be prohibited under this proposed rule for the general population and for potentially exposed or susceptible subpopulations such as children. Certain exclusions and extensions of compliance dates beyond those adopted in the 2021 PBT final rules or subsequent PIP (3:1) final rules, however, may partially delay these reductions in exposure. More information can be found in the Exposure and Use Assessment document (Ref. 16).

### 6. Effects on State, Local, and Tribal Governments

This proposed rule, if finalized, would not have any significant or unique effects on small governments, or federalism, or tribal implications.

*F. What should I consider as I prepare my comments for EPA?*

#### 1. Submitting CBI

Do not submit CBI to EPA through <https://www.regulations.gov> or email. If you wish to include CBI in your comment, please follow the applicable instructions at <https://www.epa.gov/dockets/commenting-epa-dockets#rules> and clearly mark the part or all of the information that you claim to be 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.

#### 2. Tips for Preparing Your Comments

When preparing and submitting your comments, see the commenting tips at <https://www.epa.gov/dockets/commenting-epa-dockets.html>.

## II. Background

### A. History of this Rulemaking

#### 1. The 2021 PBT Final Rules

a. DecaBDE. EPA published a final rule in the **Federal Register** on January 6, 2021, to address its obligations under TSCA section 6(h) for decaBDE (86 FR 880; FRL-10018-87) (Ref. 3). EPA determined in the final rule that decaBDE met the TSCA section

6(h)(1)(A) criteria for expedited action. In addition, EPA determined, in accordance with TSCA section 6(h)(1)(B), that under the conditions of use, exposure to decaBDE was likely to the general population, to a potentially exposed or susceptible subpopulation, and to the environment. The 2021 decaBDE final rule generally prohibits the manufacture (including import) and processing of decaBDE, and products and articles containing decaBDE, as of March 8, 2021. Distribution in commerce of products and articles to which decaBDE has been added is prohibited as of January 6, 2022. The 2021 decaBDE final rule also included phase-in compliance dates and exclusions from prohibition:

- Allowing 18 months to phase out any manufacture, processing, and distribution in commerce of decaBDE for use in curtains in the hospitality industry, and curtains to which decaBDE has been added.
- Providing two years to phase out any processing and distribution in commerce of decaBDE for use in wire and cable insulation in nuclear power generation facilities, and decaBDE-containing wire and cable insulation.
- Providing three years to phase out any manufacture, processing, and distribution in commerce of decaBDE for use in parts installed in and distributed as part of new aerospace vehicles, and parts for such vehicles to which decaBDE has been added.
- Allowing the import, processing, and distribution in commerce of aerospace vehicles manufactured before January 8, 2024, that contain decaBDE in any part, through the end of the aerospace vehicles' service lives.
- Allowing the manufacturing, processing, and distribution in commerce of aerospace vehicles that contain decaBDE in replacement parts and replacement parts to which decaBDE has been added for such vehicles, through the end of the aerospace vehicles' service lives.
- Allowing the manufacturing, processing, and distribution in commerce of motor vehicles that contain decaBDE in replacement parts and replacement parts to which decaBDE has been added, through the end of the motor vehicles' service lives or 2036, whichever is earlier.
- Allowing the distribution in commerce of plastic shipping pallets manufactured prior to March 8, 2021, that contain decaBDE through the end of the plastic shipping pallets' service lives.
- Excluding from the general prohibition on processing and distribution in commerce for recycling

of decaBDE-containing plastic products and articles (*i.e.*, the plastic to be recycled is from products and articles that were originally made with decaBDE), and for decaBDE-containing products or articles made from such recycled plastic, processing and distributing where no new decaBDE is added during the recycling or production process.

For more information related to the 2021 decaBDE final rule, see 40 CFR 751.405.

b. *PIP (3:1)*. EPA published a final rule for PIP (3:1) in the **Federal Register** on January 6, 2021 (Ref. 4). EPA determined in the final rule that PIP (3:1) met the TSCA section 6(h)(1)(A) criteria for expedited action. In addition, EPA determined, in accordance with TSCA section 6(h)(1)(B), that under the conditions of use, exposure to PIP (3:1) was likely to the general population, to a potentially exposed or susceptible subpopulation, and to the environment. The 2021 PIP (3:1) final rule generally prohibited processing and distribution in commerce of PIP (3:1), and products or articles containing PIP (3:1) after March 8, 2021, for all uses, except for those with different compliance dates or exclusions from prohibition. The 2021 PIP (3:1) final rules also included the following compliance dates:

- Allowing until January 6, 2025, for the processing and distributing in commerce of PIP (3:1) for use in adhesives and sealants, PIP (3:1)-containing products for use in adhesives and sealants, and PIP (3:1)-containing adhesives and sealants; and
- Allowing until January 1, 2022, for the processing and distributing in commerce of PIP (3:1) for use in photographic printing articles and PIP (3:1)-containing photographic printing articles.

In addition, the 2021 PIP (3:1) final rule included the following exclusions from the general prohibition:

- Allowing the processing and distribution in commerce of PIP (3:1) and PIP (3:1)-containing products for use in certain types of hydraulic fluids, such PIP (3:1)-containing hydraulic fluids, and the specified systems to which such hydraulic fluid is added;
- Allowing the processing and distribution in commerce of PIP (3:1) for use in lubricants and greases, PIP (3:1)-containing products for use in lubricants and greases, and PIP (3:1)-containing lubricants and greases;
- Allowing the processing and distribution in commerce of PIP (3:1) and PIP (3:1)-containing products for use in new and replacement parts for motor and aerospace vehicles, the new

and replacement parts to which PIP (3:1) has been added for such vehicles, and the motor and aerospace vehicles that contain new and replacement parts to which PIP (3:1) has been added;

- Allowing the processing and distribution in commerce of PIP (3:1) for use as an intermediate in a closed system to produce cyanoacrylate adhesives;
- Allowing the processing and distribution in commerce of PIP (3:1) for use in specialized engine air filters for locomotive and marine applications, PIP (3:1)-containing products for use in specialized engine air filters for locomotive and marine applications, and PIP (3:1)-containing specialized engine air filters for locomotive and marine applications; and
- Allowing for the recycling of plastics that contained PIP (3:1) before the plastic was recycled, and the finished products or articles made of such recycled plastic, so long as no new PIP (3:1) is added during the production or recycling process.

In addition, the final rule required manufacturers, processors, and distributors of PIP (3:1) and products containing PIP (3:1) to notify their customers of these restrictions. Finally, the rule prohibited releases of PIP (3:1) and PIP (3:1)-containing products to water during manufacturing, processing, and distribution in commerce, and required commercial users of PIP (3:1) and PIP (3:1)-containing products to follow existing regulations and best management practices to prevent releases to water during commercial use (40 CFR 751.407(c)). For more information related to the 2021 PIP (3:1) Final Rule, see 40 CFR 751.407.

#### 2. *The March 2021 notification and request for comments.*

Shortly after the publication of the five 2021 PBT final rules, a wide variety of stakeholders from various sectors began raising concerns regarding the March 8, 2021, compliance date for the prohibition on the processing and distributing in commerce of PIP (3:1) for use in articles and PIP (3:1)-containing articles (Ref. 10). These stakeholders contended that they needed significantly more time to identify whether and where PIP (3:1) might be present in articles in their supply chains, find and certify alternative chemicals, and produce or import new articles that do not contain PIP (3:1). During the development of the rule, EPA conducted extensive outreach, including hosting a public webinar to gather use information on the PBTs, holding two comment periods on the Exposure and Use Assessment, and presenting the notice of proposed

rulemaking for the 2021 PBT rules at a Small Business Roundtable hosted by the Small Business Administration (SBA) Office of Advocacy to elicit public comment. EPA met with numerous stakeholders, including trade associations, entities who report PIP (3:1) under the Chemical Data Reporting Rule, and other sectors where PIP (3:1) use was identified. Despite EPA's extensive outreach, most stakeholders that contacted EPA after the rule was finalized had not commented on its proposal or otherwise engaged with the Agency on the PIP (3:1) rulemaking and did not appear to have previously surveyed their supply chains to determine whether PIP (3:1) was being used (Refs. 4, 8, 11, and 12). These stakeholders requested an extension of the compliance dates in order to clear the existing articles through the supply chain, find and certify an alternative chemical, and produce or import new articles that do not contain PIP (3:1).

On March 8, 2021, EPA issued a No Action Assurance memorandum announcing that EPA will exercise its enforcement discretion to not pursue enforcement actions for certain violations of the prohibitions on processing and distribution of PIP (3:1) for use in articles, and the articles to which PIP (3:1) has been added. Such discretion was conditioned on certain recordkeeping requirements and remained in effect until September 4, 2021. The purpose of the discretion was, among other things, "to avoid widespread disruption of critical supply chains, while OCSPP develops a final agency action to ensure the appropriate timeline to prohibit critical complex articles" (Ref. 52).

In accordance with the Executive Order 13990 "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis" and other relevant executive orders, EPA requested additional public comments on the five 2021 PBT final rules. On March 16, 2021, EPA announced its intent to review the five 2021 PBT final rules and requested public comment (EPA-HQ-OPPT-2021-0202). Specifically, EPA sought comment on whether there are further exposure reductions that could be achieved, including exposure reductions for potentially exposed or susceptible subpopulations and the environment; implementation issues associated with the five 2021 PBT final rules; and whether to consider additional or alternative measures or approaches. EPA specifically asked for comment on issues raised regarding the compliance date for the prohibition on the processing and distribution of PIP

(3:1) for use in articles and PIP (3:1)-containing articles, as well as any implementation issues (see Unit III.D.1 for more information).

According to the comments received prior to and in response to the March 2021 notification and request for comments, a wide range of key consumer and commercial goods are affected by the prohibitions in the 2021 PIP (3:1) final rule such as cellular telephones, laptop computers, and other electronic devices and industrial and commercial equipment used in various sectors including transportation, life sciences, and semiconductor production (Ref. 17). These comments are addressed in EPA's September 2021 PIP (3:1) final rule and October 2021 PIP (3:1) proposed rule (Refs. 11 and 12). EPA received a total of 122 comments in response to the March 2021 notification and request for comments, most of which regarded issues pertaining to PIP (3:1) (Ref. 17).

In addition, several comments received raised issues pertaining to decaBDE. Tribal government commenters recommended further regulation of decaBDE, including narrowing the replacement part exclusion to time-limited critical uses, addressing potential risks from releases to the environment, restricting the disposal of decaBDE and decaBDE-containing products and articles, and addressing potential risks from occupational exposure (EPA-HQ-OPPT-2021-0202). EPA also received a comment requesting the Agency hold a government-to-government consultation with the Yurok Tribal Council (Ref. 26). In November 2022, EPA held a one-on-one tribal consultation with the Yurok Tribal Council. During this consultation, the Agency received additional information that informed the Agency of considerations to reduce potential exposures to decaBDE, including labeling and a prohibition on the releases to water, see Units III.C.1. and III.C.3. for more information. EPA received no comments addressing the need for extensions to compliance dates for decaBDE.

### 3. PIP (3:1) compliance date extensions.

Based on the PIP (3:1)-specific comments received in response to the March 2021 notification and request for comments, EPA issued an immediately effective final rule in September 2021, which extended the compliance dates applicable to the processing and distribution in commerce of certain PIP (3:1)-containing articles and the PIP (3:1) used to make those articles, until March 8, 2022, along with the associated recordkeeping requirements

for manufacturers, processors, and distributors of PIP (3:1)-containing articles (Ref. 11). While most commenters on the March 2021 notification and request for comments requested a longer-term compliance date extension (Ref. 8), EPA determined that a short-term extension was necessary to ensure that the supply chains for these important articles continue uninterrupted in the near term while allowing EPA to conduct notice and comment rulemaking on a longer-term compliance date extension generally.

On March 8, 2022, EPA further extended the compliance deadline established in the September 2021 final rule for the processing and distribution in commerce of PIP (3:1) for use in certain articles and for the processing and distribution in commerce of certain PIP (3:1)-containing articles, from March 8, 2022, to October 31, 2024 (Ref. 13). The compliance date for the recordkeeping requirements for manufacturers, processors, and distributors of PIP (3:1)-containing articles was also extended from March 8, 2022, to October 31, 2024. Articles covered by the phased-in prohibition include any article not otherwise covered by an alternative compliance deadline or exclusion described in 40 CFR 751.407(a)(2)(ii) or (b). EPA reasoned that this further extension would avoid significant disruption in the supply chains for certain articles and would provide the public with regulatory certainty, while EPA determined whether any further compliance date extensions are necessary.

#### 4. Activities not regulated by this proposed rule.

EPA is not proposing revisions to the other three PBT rules issued under TSCA section 6(h) for 2,4,6-TTBP, HCBP, and PCTP at this time. EPA is not moving forward with reconsideration of the other three final rules at this time. Due to resource constraints and competing statutory obligations elsewhere in the existing chemicals risk management program, EPA is only proposing amendments to 40 CFR part 751, subpart E for the decaBDE and PIP (3:1) regulations at this time.

### B. EPA's Implementation of TSCA Section 6(h)

#### 1. EPA's TSCA section 6(h)(1) findings.

As previously detailed in the 2021 decaBDE and PIP (3:1) final rules, for chemical substances meeting the requirements of TSCA section 6(h)(1)(A) and (B), TSCA section 6(h)(4) required EPA to issue a final TSCA section 6(a)

rule to "address the risks of injury to health or the environment that the Administrator determines are presented by the chemical substance and reduce exposure to the substance to the extent practicable." EPA made the requisite TSCA section 6(h)(1)(A) and (B) findings for decaBDE and PIP (3:1), triggering the requirement for a TSCA section 6(a) rulemaking under TSCA section 6(h)(4) standard. This proposed rulemaking does not amend these findings.

#### 2. EPA's approach to TSCA section 6(h)(4).

In the 2021 PBT final rules, EPA explained that it read the TSCA section 6(h)(4) standard to apply to the chemical substance generally, thus requiring EPA to "address risks" and "reduce exposures" to the chemical substance without focusing on how or whether the measure taken is specific to an activity that might be characterized as a "condition of use" as that term is defined in TSCA section 3(4). Thus, the 2021 final rules address past, present, and future activity involving the chemical substance. In the 2021 PBT final rules, EPA also explained that because there was no existing risk evaluation or assessment for each chemical substance and one was not contemplated by TSCA section 6(h), EPA's implementation of the standard in TSCA section 6(h)(4) focused on applying the TSCA sections 6(a) and (c) requirements in a manner that reduces exposure to the chemical substance to the extent practicable. This proposed rulemaking does not amend these interpretations or EPA's approach for implementing TSCA section 6(h)(4). Rather, this rulemaking is intended to identify further opportunities to reduce risk to the substances to the extent practicable based on additional available information received in the comments to EPA's 2021 request for comment.

As demonstrated by the number of distinct programs addressed in this rulemaking and the structure of this proposed rule in addressing them independently, EPA generally intends the rule's provisions to be severable from each other. EPA expects to provide additional detail on severability in the final rule once the Agency has considered public comments and finalized the regulatory language.

#### 3. EPA's interpretation of "to the extent practicable" as used in TSCA section 6(h)(4).

EPA is not changing the general interpretation of the term "practicable" as discussed in the five 2021 PBT final rules (86 FR 866, 86 FR 880, 86 FR 922, 86 FR 894, and 86 FR 911). As

explained in that rulemaking, TSCA section 6(h)(4) provides that EPA shall: (1) “Address the risks of injury to health or the environment that the Administrator determines are presented by the chemical substance” and (2) “reduce exposure to the substance to the extent practicable” which EPA reads to apply generally to the chemical and any potential for exposures within TSCA jurisdiction. With respect to the first requirement, EPA explained that the TSCA section 6(h) standard is distinct from the “unreasonable risk” standard for all other chemicals for which a section 6(a) rule might be issued. However, the phrase is not defined in the statute and there is no legislative history to explain what Congress intended with this text in section 6(h)(4). Given the ambiguity of this text, EPA further noted that it had considered the relevance of other provisions in the statute, *e.g.*, TSCA section 6(c) and concepts in TSCA section 6(g), and, as discussed in the response to comment document for the 2021 PBT Final rules, interprets “reduce exposures to the extent practicable” to consider such factors as “achievability, feasibility, workability and reasonableness,” consistent with dictionary definitions.” Thus, EPA noted that “[w]hether a regulatory option is achievable, feasible, workable, and reasonable inherently takes into consideration circumstances, such as the economic burden and complexities with an option, the utility of the chemical, and whether there are technically and economically feasible alternatives available for the chemical.” EPA further explained that its approach is consistent with dictionary definitions of the term “practicable” which inherently includes considerations outlined in TSCA section 6(c)(2) and 6(g), such as health effects, magnitude of exposure, and the relative costs and benefits of the action.

This interpretation of “to the extent practicable” for purposes of TSCA section 6(h)(4) is not amended. The application of this interpretation was informed by what the Agency could consider during an expedited rulemaking process and the body of information available to determine whether a prohibition would be practicable. EPA has collected additional information and reconsidered its application of this interpretation, focusing particularly on whether additional practicable requirements can reduce occupational exposures, including those associated with previously broadly-stated exclusions.

4. *EPA’s position on directly regulating occupational exposures.*

EPA did not use its TSCA section 6(a) authorities to directly regulate occupational exposures in the 2021 decaBDE or PIP (3:1) final rules. As a matter of policy at that time, EPA assumed compliance with federal and state requirements, such as worker protection standards, unless case-specific facts indicated otherwise. For example, the Occupational Safety and Health Administration (OSHA) has not established a permissible exposure limit (PEL) for decaBDE and PIP (3:1). However, EPA assumed that employers would require, and workers would use, appropriate PPE consistent with general OSHA standards, considering employer-based assessments, in a manner sufficient to prevent occupational exposures that are capable of causing injury. EPA also stated that given the time allotted for the TSCA section 6(h) rulemakings and that no risk evaluation or assessment was required or feasible in the time available under the statute, EPA could not identify additional engineering or process controls or PPE requirements that would be appropriate to each chemical-specific circumstance, and that imposing such measures without sufficient analysis could inadvertently result in conflicting or confusing requirements and make it difficult for employers to understand their obligations. For these reasons, EPA determined that it was not practicable to regulate worker exposures in the 2021 rules through engineering or process controls or PPE requirements. However, due to an increased focus on worker safety and a change in EPA’s assumptions regarding the use of worker protection measures such as PPE, the Agency is reconsidering the practicability of requiring worker protections.

For purposes of determining whether worker protection measures are practicable under TSCA section 6(h)(4), EPA no longer believes it is appropriate to assume as a general matter that an applicable OSHA requirement or industry practice is consistently or always properly applied. This change in assumption should not be viewed as an indication that the Agency believes there are no occupational safety protections in place at any location, or that there is widespread noncompliance with applicable OSHA standards. Rather, it reflects the Agency’s recognition that its interpretation of the TSCA section 6(h)(4) standard “to reduce exposure . . . to the extent practicable” calls for worker protection measures to reduce the potential for exposure to PBTs generally, considering what is achievable, feasible, workable,

and reasonable, in light of the circumstances. This is the case even in the absence of a risk evaluation or risk assessment and even if existing OSHA requirements might apply, such as those under the General Duty Clause of the Occupational Safety and Health Act (29 U.S.C. 654(a)) or OSHA’s Respiratory Protection standard (29 CFR 1910.134).

However, TSCA section 9(d) requires EPA to consult and coordinate TSCA activities with OSHA and other relevant Federal agencies for the purpose of achieving the maximum applicability of TSCA while avoiding the imposition of duplicative requirements. OSHA requires that employers provide safe and healthful working conditions through enforcement of the General Duty Clause and by setting and enforcing occupational safety and health standards under 29 U.S.C. 655. OSHA also provides training, outreach, education, and assistance. Where EPA has reason to believe that there might be the potential for exposure to workers to decaBDE and PIP (3:1), the Agency considers it practicable to require worker protections in addition to applicable OSHA regulations (*e.g.*, fit testing and training requirements). To determine what worker protections measures are practicable, the Agency reconsidered the reasonably available information on the use of industry worker protection measures, including best practices, and considered new information received after the 2021 PBT final rules gathered during engagements with industry stakeholders and from the March 2021 notification and request for public comment period to propose these requirements (Ref. 18). This information was used to inform the proposed requirements for inhalation and dermal PPE to reduce worker exposure to decaBDE and PIP (3:1).

EPA also considered the National Institute for Occupational Safety and Health (NIOSH) hierarchy of controls (*i.e.*, prioritization of exposure control strategies from most protective and preferred to least protective and preferred techniques). In order of precedence, this hierarchy of controls includes elimination of the hazard, substitution with a less hazardous substance, engineering controls, administrative controls (*e.g.*, training or exclusion zones with warning signs), and, finally, use of PPE (Ref. 19). Under the hierarchy of controls, the use of respirators should only be considered after all other measures have been taken to reduce exposures, and then under the context of the OSHA Respiratory Protection Standard at 29 CFR 1910.134. Under OSHA’s standards, the various exposure controls are prioritized

equally, followed by PPE requirements when necessary. When formulating the proposed worker protection requirements on the limited time allotted for the TSCA section 6(h) rulemakings, no risk evaluation or assessment was required or feasible and an already existing risk assessment was not available to support calculation of safe exposure levels for these two chemicals, which would be necessary for EPA to establish a workplace chemical protection program. Thus, EPA is proposing specific engineering controls and PPE for one industry sector, specifically, the use of PIP (3:1) as an intermediate in cyanoacrylate adhesives in which the Agency had additional information about existing practice. EPA is requesting comment on the practicability of worker protection measures that are higher in the hierarchy of controls (e.g., engineering, and administrative controls) due to the lack of existing available information.

### C. Overview of TSCA Sections 6(c) and 26 Considerations

Unless explicitly stated, the following overview is meant to be a summary of information previously provided by EPA in the 2021 decaBDE and PIP (3:1) final rules regarding TSCA sections 6(c) and 26 considerations. It is not intended to serve as a new proposal of findings under or interpretations of TSCA section 6(h)(4).

#### 1. TSCA section 6(c)(2) considerations.

TSCA section 6(c)(2) requires EPA to consider and publish a statement based on reasonably available information with respect to the:

- Health effects of the chemical substance(s) or mixture(s) and the magnitude of human exposure;
- Environmental effects of the chemical substance(s) or mixture(s) and the magnitude of exposure to the environment;
- Benefits of the chemical substance(s) or mixture(s) for various uses; and
- Reasonably ascertainable economic consequences of the rule, including: the likely effect of the rule on the national economy, small business, technological innovation, the environment, and public health; the costs and benefits of the proposed and final rule and of the one or more primary alternative regulatory actions that EPA considered; and cost effectiveness of the proposed rule and of the one or more primary alternative regulatory actions that the Agency considered.

In selecting among prohibitions and other restrictions available under TSCA section 6(a), EPA must factor in, to the

extent practicable, these considerations. Further, in deciding whether to prohibit or restrict the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance or mixture in a manner that substantially prevents a specific condition of use of a chemical substance or mixture, and in setting an appropriate transition period for such action, EPA must consider, to the extent practicable, whether technically and economically feasible alternatives that benefit health or the environment would be reasonably available as a substitute when the proposed prohibition or other restriction takes effect.

EPA's summary of the health and environmental effects of and the potential for exposure to the two PBT chemicals subject to this proposed action can be found in the 2021 PBT final rules for each chemical, the support documents for those final rules (e.g., the Exposure and Use Assessment (Ref. 16) and the Hazard Summary (Ref. 20)).

The costs and benefits of this proposal and the alternatives EPA considered, as well as the impacts on small businesses, are presented in the economic analysis document (Ref. 14). However, the Agency was not able to quantitatively estimate the benefits of this proposal and the alternatives, due to the absence of a risk evaluation, and has instead qualitatively described such benefits. EPA requests comment on all aspects of the benefits attributable to these proposed regulations.

EPA considered the estimated costs to regulated entities, as well as the cost to administer and enforce the options. EPA considered reasonably available information about the functionality and performance efficacy of the regulatory options and the ability to implement the use of chemical substitutes or other alternatives. A discussion of the costs EPA considered can be found in Unit IV., along with a discussion of the alternatives that the Agency considered. A discussion of the impacts on small businesses can also be found in Unit IV.

With respect to the cost-effectiveness of this proposed regulatory action, EPA is unable to perform a traditional cost-effectiveness analysis of the options and alternative options for decaBDE and PIP (3:1). The cost-effectiveness of a policy option would properly be calculated by dividing the annualized costs of the option by a final outcome, such as cancer cases avoided, or to intermediate outputs, such as tons of emissions of a pollutant curtailed. Without the supporting analyses from an existing risk evaluation or assessment, the Agency is unable to calculate either a

health-based or environment-based denominator. Thus, EPA is unable to perform a quantitative cost-effectiveness analysis of the regulatory action. However, by evaluating the practicability of the policy options, the Agency believes that it has considered elements related to the cost-effectiveness of the actions, including the cost and the effect on human and environmental exposure to decaBDE and PIP (3:1).

#### 2. TSCA section 26(h) considerations.

In accordance with TSCA section 26(h) and considering the requirements of TSCA section 6(h), EPA used scientific information, technical procedures, measures, and methodologies that are fit for purpose and consistent with the best available science to inform the 2021 PBT final rules. EPA based its determination that human and environmental exposures to both decaBDE and PIP (3:1) are likely in its 2020 Exposure and Use Assessment (Ref. 16), which underwent a peer review and public comment process, and used best available science and methods sufficient to make that determination. The extent to which the various information, procedures, measures, and methodologies, as applicable, used in the Agency's decision-making have been subject to independent verification or peer review is adequate to justify their use, collectively, in the record for this proposed rule. In addition, in accordance with TSCA section 26(i), and considering the requirements of TSCA section 6(h), EPA has made scientific decisions based on the weight of the scientific evidence.

### D. Overview, Health Effects, and Exposure

For the 2019 PBT proposed rule, EPA prepared an Exposure and Use Document, summarizing the information the Agency obtained in its own research or in response to feedback prior to and during the rulemaking process on the types of exposures that might be relevant to a TSCA section 6(a) rulemaking under the TSCA section 6(h)(4) standard. As noted in the 2021 PBT final rules, the Exposure and Use Assessment identified the types of exposures that could occur, but such information was not intended to identify "conditions of use." As EPA explained in the 2021 PBT final rules, the Agency did not perform a systematic review or a weight of the scientific evidence assessment for the hazard characterization of these chemicals. As a result, EPA explained that the hazard characterizations are not definitive or comprehensive. Other hazard



information on these chemicals may exist in addition to the description in the 2021 PBT final rules and studies summarized in the Hazard Summary (Ref. 20). The following sections summarize the hazard and Exposure and Use information in the 2021 decaBDE and PIP (3:1) final rules.

#### 1. *DecaBDE*.

As EPA explained in the 2021 decaBDE final rule, decaBDE is used as an additive flame retardant in plastic enclosures for televisions, computers, audio and video equipment; textiles and upholstered articles; wire and cables for communication and electronic equipment; and other applications (Ref. 21). DecaBDE is also used as a flame retardant for multiple applications for aerospace and automotive vehicles, including replacement parts for aircraft and cars (Refs. 22 and 23). Exposure information for decaBDE is detailed in EPA's Exposure and Use Assessment and the 2021 decaBDE final rule (Refs. 3 and 16). As EPA explained in that rule, there is potential for exposure to decaBDE under the conditions of use at all stages of its lifecycle (*i.e.*, manufacturing, processing, distribution in commerce, use [industrial, commercial, and consumer], and disposal) of the chemical. DecaBDE was produced and released at higher levels in the past, but releases from manufacturing and processing activities have declined over time, as are releases associated with use, disposal, and recycling activities (Ref. 16). This decline is in part due to a voluntary phase out by the largest producers and suppliers of decaBDE in the United States, that committed to end their production, imports, and sales for all uses of decaBDE by the end of 2013 (Ref. 14).

As described in the 2021 decaBDE final rule, exposure assessments on decaBDE have been conducted by EPA (including industry-supplied information as part of the Voluntary Children's Chemical Evaluation Program), the National Academy of Sciences, and international governments. These assessments describe exposure potential for polybrominated diphenyl ethers (PBDEs), including decaBDE, through a variety of pathways. Adult and child exposures can occur via dust ingestion, dermal contact with dust, and dietary exposures (such as dairy consumption). Household consumer products have been identified as the main source of PBDEs (including decaBDE) in house dust. The next highest exposure pathways included dairy ingestion and inhalation of indoor air (via dust). Infant and child exposures can occur via

breastmilk ingestion and mouthing of hard plastic toys and fabrics. Occupational exposures for breastfeeding women were highest in women engaged in activities resulting in direct dermal and inhalation contact with decaBDE (Ref. 16).

Finally, as summarized in the 2021 decaBDE final rule, decaBDE is toxic to aquatic invertebrates, fish, and terrestrial invertebrates. Data indicate the potential for developmental, neurological, and immunological effects, general developmental toxicity, and liver effects in mammals. There is some evidence of genotoxicity and carcinogenicity. The 2021 decaBDE final rule and Hazard Summary provide more information on these hazardous endpoints (Ref. 20).

For the 2020 Chemical Data Reporting (CDR) submission period, calendar years 2016–2019, data indicate that three companies manufactured (including imported) decaBDE in the United States (Refs. 14 and 24). The 2020 CDR data indicate a production volume of less than 1 million pounds annually from 2016 thru 2019, however, EPA notes that domestic production has ceased, and the identified importers have likely since stopped using decaBDE (Ref. 24).

#### 2. *PIP (3:1)*.

As explained in the 2021 PBT final rules, PIP (3:1) is used as a plasticizer, a flame retardant, an anti-wear additive, or an anti-compressibility additive in hydraulic fluid, lubricating oils, lubricants, greases, various industrial coatings, adhesives, sealants, and plastic articles. As a chemical that can perform several functions simultaneously, sometimes under extreme conditions, it has several distinctive applications. For example, in lubricating oils, PIP (3:1) is a flame retardant, anti-wear additive, anti-compressibility additive, or some combination of the three. In adhesives and sealants, PIP (3:1) is a plasticizer and flame retardant (Ref. 16). PIP (3:1) is also added to paints, coatings, and plastic components, where it is a plasticizer or flame-retardant additive. In the past, some plastic components to which PIP (3:1) may have been added included those intended for use by children. EPA has received comments that PIP (3:1) acts as a flame-retardant gel in filters surrounding engines in some marine and locomotive applications (EPA-HQ-OPPT-2019-0080-0569).

Exposure information for PIP (3:1) is detailed in EPA's Exposure and Use Assessment and is summarized here (Ref. 16). There is potential for exposure to PIP (3:1) under the conditions of use at all stages of its lifecycle (*i.e.*, manufacturing, processing, distribution

in commerce, use [industrial, commercial, and consumer], and disposal). PIP (3:1) is manufactured, processed, distributed, and used domestically. For the 2012 CDR submission period, data indicate that four sites manufactured (including imported) PIP (3:1) in the United States. The total volume of PIP (3:1) manufactured (including imported) in the United States was 14,904,236 lbs. in 2011; 3,191,017 lbs. in 2012; 2,968,861 lbs. in 2013; 5,632,272 lbs. in 2014; and 5,951,318 in 2015 (Ref. 24). For the 2020 CDR submission period, calendar years 2016–2019, data indicate that nine sites manufactured (including imported) PIP (3:1) in the United States and manufacture (including import) held steady at between 1 and 10 million pounds (Refs. 14 and 24). The total volume of PIP (3:1) manufactured (including imported) in the United States was 14,904,236 lbs. in 2011; 3,191,017 lbs. in 2012; 2,968,861 lbs. in 2013; 5,632,272 lbs. in 2014; and 5,951,318 in 2015 (Ref. 24).

PIP (3:1) is toxic to aquatic plants, aquatic invertebrates, sediment invertebrates, and fish. Data indicate the potential for reproductive and developmental effects, neurological effects, and effects on systemic organs, specifically the adrenal glands, liver, ovaries, and heart in mammals. The studies presented in the 2019 Hazard Summary, titled "Environmental and Human Health Hazards of Five Persistent, Bioaccumulative and Toxic Chemicals," describe these hazardous endpoints (Ref. 25).

### III. Proposed Regulatory and Alternative Regulatory Actions

#### A. *Regulatory Approach*

In this action, EPA is proposing revisions to the 2021 decaBDE final rule and the 2021 and 2022 PIP (3:1) final rules. EPA has collected additional information and reconsidered its application of its interpretation of the TSCA section 6(h)(4) direction that the Agency "reduce exposures to the substance to the extent practicable," focusing particularly on whether additional practicable requirements can reduce occupational exposures (see Unit II.B.3. and Unit II.B.4. for additional details), including those associated with exclusions. As described throughout this Unit, EPA has considered the practicability of the proposed and alternative regulatory actions. EPA considered how potential restrictions on the use of PIP (3:1) and decaBDE and the compliance timeframes associated with certain actions could impact supply chains, including those

prioritized in Executive Order 14017 America's Supply Chains.

### *B. Activities EPA Did Not Reevaluate for This Rulemaking*

As explained in the 2021 decaBDE and PIP (3:1) final rules, at this time, EPA is not proposing to use its TSCA section 6(a) authorities to regulate all activities or exposures to decaBDE and PIP (3:1), although its Exposure and Use Assessment identified potential for exposures (Ref. 16). One such activity is disposal. As described in the 2021 PBT rulemakings, regulations promulgated under the authority of the Resource Conservation and Recovery Act (RCRA) govern the disposal of hazardous and non-hazardous wastes. Although decaBDE and PIP (3:1) are not listed or characteristic hazardous wastes under RCRA, they are subject to the requirements applicable to solid waste under Subtitle D of RCRA. This means there is a general prohibition on open dumping, which includes a prohibition on open burning (*e.g.* the subtitle D ban on open dumping is at 42 U.S.C. 6945). Wastes containing chemicals that do not otherwise meet the criteria for hazardous waste would be disposed of in municipal solid waste landfills (MSWLFs), industrial nonhazardous landfills, or, in a few instances, construction/demolition landfills. Non-hazardous solid waste is regulated under Subtitle D of RCRA, and states play a lead role in ensuring that the federal requirements are met (see 40 CFR part 239). The requirements for MSWLFs are discussed in further detail in the 2021 PBT final rules. In those rules, EPA also explained that establishing an entirely new disposal program for decaBDE-containing and PIP (3:1)-containing wastes would be not practicable. Both 2021 decaBDE and PIP (3:1) final rules discuss how this type of program would be difficult to establish and administer, as well as costly. In addition, treating these wastes in a manner similar to wastes listed as hazardous wastes would have impacts on hazardous waste treatment and disposal capacity and have resource impacts for states and local governments, as well as for affected industries (Refs. 3 and 4). Taking this into account, EPA did not reevaluate the practicability of further exposure reductions relating to disposal of decaBDE and PIP (3:1), as well as decaBDE- and PIP (3:1)-containing wastes.

As also explained in the 2021 PBT final rules, EPA did not propose regulations relating to commercial use of products and articles containing the PBT chemicals, such as televisions and

computers, because such regulation would both require testing, which may not be commercially available for a chemical, and be extremely burdensome, necessitating the development of a test method to allow for the identification of products containing PBT chemicals, including decaBDE and PIP (3:1), and the disposal of countless products and articles that would have to be replaced. If EPA prohibited the continued commercial use of these items, widespread economic impacts, and disruption in channels of trade could occur while the prohibited items were identified and replaced. EPA also acknowledged, based on additional information provided by industry stakeholders after the 2021 PIP (3:1) final rule, that international supply chains are complex, and that complexity creates challenges for identifying and finding alternatives to PIP (3:1) in international supply chains. Taking this into account, EPA did not reevaluate the practicability of further exposure reductions relating to continued commercial use of products and articles containing decaBDE and PIP (3:1) at this time.

Finally, in the 2021 PBT final rules, EPA explained that it did not propose to use its TSCA section 6(a) authorities to restrict recycling activities generally. EPA explained that it recognized the importance and impact of recycling, which contributes to the protection of our environment, and that it would be overly burdensome and not practicable to impose restrictions on the recycling of plastics that may contain decaBDE or PIP (3:1), or on the use of such recycled plastic in plastic articles. EPA also explained that decaBDE and PIP (3:1), if present, are typically present in such articles at low levels and that banning the recycling of plastics containing decaBDE or PIP (3:1) would require decaBDE- and PIP (3:1)-containing plastic to be identified through prohibitively expensive and complicated testing, and separated from other types of plastic before recycling, which is usually done manually (Ref. 27). EPA concluded that it would be difficult to make plastic sorting for this purpose cost-effective, and that it would be overly burdensome and not practicable to prohibit recycling of decaBDE- and PIP (3:1)-containing plastic in the United States. Taking this into account, EPA did not reevaluate the practicability of further exposure reductions relating to a prohibition of, or further regulatory restrictions on, the general recycling of decaBDE- and PIP (3:1)-containing plastic in the United States at this time. As noted in Unit

III.C., the one exception relates to the 2021 decaBDE final rule authorization for the continued recycling and distribution in commerce of existing plastic shipping pallets already known to contain decaBDE for the extent of the pallets' service life because EPA believes it is practicable to regulate when the expensive testing is not necessary to determine the chemical's presence in the article.

### *C. DecaBDE—Proposed Revisions to 40 CFR 751.405*

#### *1. Require a label on existing plastic shipping pallets that contain decaBDE.*

*a. Description of the proposed regulatory action.* EPA is proposing to require a label on existing plastic shipping pallets that contain decaBDE. As mentioned in Unit II.A., after holding an additional tribal consultation, EPA received comments requesting the Agency to label plastics that contain decaBDE (Ref. 28). New plastic shipping pallets containing newly added decaBDE are prohibited under the 2021 decaBDE final rule (40 CFR 751.405(b)). EPA determined it is practicable to label existing plastic shipping pallets containing decaBDE because all plastic shipping pallets are owned by a single company, and such company is aware of and tracks, as part of normal business operations, each decaBDE-containing plastic shipping pallet. No new decaBDE has been added to the company's plastic shipping pallets since 2012 (Ref. 23). EPA is not proposing additional testing requirements to determine if decaBDE is present in the plastic shipping pallets.

The proposed label would provide notice to workers that PPE is required to be worn during recycling, refurbishing, or processing of existing plastic shipping pallets that contain decaBDE, which would reduce potential exposures to decaBDE, see Unit III.C.2 for more information on specific PPE requirements. EPA is proposing that the label must be securely attached to the plastic shipping pallet that is known to contain decaBDE and is requesting comment on whether the labels should be required to be available in multiple languages if necessary (*e.g.*, notice would be in a language that the potentially exposed person understands, including a non-English language version representing the language(s) of the largest group(s) of workers who cannot readily comprehend or read English). EPA understands that the company typically attaches a label when it has possession of a plastic pallet in its inventory (*i.e.*, after a pallet is returned from being rented out) as part of normal business practice. EPA is proposing that

the labeling information must show clearly, prominently, and in an easily readable font size, the following text: “This pallet contains decabromodiphenyl ether (decaBDE) (CASRN 1163–19–5), a chemical that has been identified as persistent, bioaccumulative, and toxic (PBT) by the U.S. Environmental Protection Agency. All persons who recycle or process this pallet are required to wear personal protective equipment, per regulations at 40 CFR 751.405(e). The use of decaBDE is restricted under 40 CFR 751.405: All persons are prohibited from all manufacturing (including importing), processing, or distribution in commerce of decaBDE or decaBDE-containing products or articles, except for select uses, including those for plastic shipping pallets at 40 CFR 751.405(a)(2)(v) and (b). After the end of the pallets’ service life, all persons are prohibited from all distribution in commerce of plastic shipping pallets that contain decaBDE and were manufactured prior to March 8, 2021.” EPA is requesting comment on the practicability of the proposed label and the language EPA has proposed to require on each label.

b. *Description of the primary alternative regulatory option considered.* As a primary alternative regulatory option, EPA considered requiring a label on all recycled plastic articles that may contain decaBDE to aid in directions for worker protections. EPA considered this option because of a government-to-government consultation with the Yurok Tribal Council and comments received after this consultation (Ref. 28). However, EPA considered it would not be practicable to label all recycled plastic articles that may contain decaBDE (*e.g.*, replacement parts for aerospace or motor vehicles). As mentioned in Unit II.D., domestic manufacture of decaBDE has ceased; however, decaBDE-containing articles may still be imported into the United States. Although decaBDE’s use has been largely phased out, the Truck and Engine Manufacturers Association (EMA), in comments on the 2019 proposed PBT rule, cautioned EPA that their member manufacturers’ supply chains are very complex, and chemicals may be introduced into a part “as many as seven layers deep into the supply chain” (Ref. 29). Due to the complexity of supply chains, it is difficult to identify whether and where decaBDE is added in an article, hence making it difficult to determine where a label would be attached.

2. *Require use of PPE for certain activities involving decaBDE.*

a. *Description of the proposed regulatory action.* To ensure minimal potential for exposure to workers during domestic manufacturing and processing of decaBDE and decaBDE-containing products and articles, EPA is broadly proposing certain PPE requirements to address potential respiratory and dermal exposure to occupational workers during permitted ongoing activities involving decaBDE, with several proposed exclusions, including those which are being phased out. Due to the broad prohibition on manufacturing and processing in the 2021 decaBDE final rule and that several permitted uses will be phased out before rule finalization, the proposed protections would generally be required for certain ongoing uses listed at 40 CFR 751.405(a)(2) and 751.405(b).

For recycling activities, EPA is proposing to require respiratory and dermal PPE, NIOSH-approved N95 respirator with an assigned protection factor (APF) of 10 and gloves that are chemically resistant to decaBDE, only during the recycling process of plastic shipping pallets that are known to contain decaBDE. After EPA considered additional information on industry use of PPE, the Agency concluded that it is practicable to require PPE during the manufacturing and processing of certain decaBDE and decaBDE-containing products and articles. EPA believes based on comments that it is practicable to require PPE for the processing of existing plastic shipping pallets because it is already industry practice (Ref. 23). For other all other recycling activities, due to the difficulty in identifying whether and where decaBDE is present in an article, EPA maintains that it would be impracticable to establish a testing program to determine if decaBDE is present.

EPA is not proposing to require PPE for processing of decaBDE-containing wire and cable for use in nuclear power generation facilities, the processing of new and replacement parts to which decaBDE has been added for motor and aerospace vehicles, and the motor and aerospace vehicles that contain new and replacement parts to which decaBDE has been added. This is because the Agency believes the processing of these articles would result in minimal potential for worker exposure because, once formulated, decaBDE is encased in the cured coating and the potential for worker exposure is minimal (Ref. 16). EPA is also not proposing to require PPE for distribution in commerce of decaBDE or decaBDE-containing products or articles, since the distribution in commerce of these decaBDE-containing products or articles

would result in minimal potential for exposure. Lastly, because EPA generally believes the potential for exposure is low during importation, the Agency is not proposing to require worker protections for import of decaBDE and decaBDE-containing products and articles. Addressing such minimal potential for exposure through worker protections would not be practicable considering the additional costs and resource burdens (Ref. 16).

For the activities subject to the proposed PPE requirements and to reduce potential occupational exposure during the recycling process of plastic shipping pallets known to contain decaBDE, EPA is proposing to require, at a minimum, a NIOSH-approved N95 respirator with an assigned protection factor (APF) of 10 and gloves that are chemically resistant to decaBDE with activity-specific training where dermal contact with decaBDE is possible.

EPA is proposing to require implementation of a PPE program in alignment with certain elements of OSHA’s General Requirements for PPE at 29 CFR 1910.132 and Respiratory Protection requirements in 29 CFR 1910.134. EPA is proposing to require that owners and operators ensure that each potentially exposed person who is required to wear PPE use and maintain PPE in a sanitary, reliable, and undamaged condition. Owners and operators would be required to select and provide PPE that properly fits each potentially exposed person who is required to use PPE. For N95 respirators with an APF 10, EPA is proposing that the owner or operator must ensure that all respirators used in the workplace are NIOSH-approved as listed on the NIOSH Certified Equipment List (Refs. 30 and 31). In choosing appropriate gloves, EPA expects owners and operators would consider the effectiveness of the glove type when preventing exposures from decaBDE alone, and in likely combination with other chemical substances used in the work area, the degree of dexterity required to perform tasks, and the temperature, as identified in the Hand Protection section of OSHA’s PPE guidance (Ref. 32). Owners and operators would also be required to communicate PPE selections (*e.g.*, demonstration that each item of PPE selected prevents exposure during expected duration and conditions of exposure) to each affected person.

EPA is proposing to require each owner or operator to comply with OSHA’s general PPE training requirements at 29 CFR 1910.132(f) when using respirators and gloves. EPA is proposing that owners and operators

provide PPE training to each potentially exposed person who is required to wear PPE prior to or at the time of initial assignment to a job involving potential exposure to decaBDE.

EPA is also proposing to require implementation of a respiratory protection program in alignment with 29 CFR 1910.134(a) through (l), which requires each owner or operator to select respiratory protection in accordance with the guidelines for proper respirator use, maintenance, fit-testing, medical evaluation, and training. EPA is also proposing that owners or operators who would be required to administer a respiratory protection program be required to supply a respirator selected in accordance with 29 CFR 1910.134(d)(1).

EPA proposes to require that owners and operators document respiratory protection used and PPE program implementation and retain those records for five years. EPA proposes to require that owners and operators document and keep records of the following information on the PPE program, as applicable, and make it available to the Agency upon request:

(A) The name, workplace address, work shift, job classification, and work area of each person reasonably likely to directly handle decaBDE or handle equipment or materials on which decaBDE may be present and the type of PPE selected to be worn by each of these persons;

(B) The basis for PPE selection (*e.g.*, demonstration based on permeation testing or manufacturer specifications that each item of PPE selected provides an impervious barrier to prevent exposure during expected duration and conditions of exposure, including the likely combinations of chemical substances to which the PPE may be exposed in the work area); and

(C) Documentation that the selection appropriately sized PPE and training on proper application, wear, and removal of PPE, and proper care/disposal of PPE occurred.

EPA is proposing to require that each owner or operator supply PPE, selected in accordance with 40 CFR 751.405(e), to each potentially exposed person within 60 days after publication of the final rule.

b. *Description of the primary alternative regulatory option considered.* As a primary alternative regulatory option, EPA considered requiring respiratory and dermal PPE during all recycling processes of decaBDE-containing plastic products and articles. However, as stated in Unit III.B. and in the 2021 PBT final rules, EPA did not propose to use its TSCA

section 6(a) authorities to restrict recycling activities generally. EPA did not reevaluate the practicability of further exposure reductions relating to prohibiting, or further regulatory restrictions on, the general recycling of decaBDE-containing plastic in the United States. As mentioned in the 2021 response to comment document, in order to determine if decaBDE is present in plastics at recycling facilities, a testing program would need to be established (Ref. 33). EPA further explained that that it would also be difficult to make plastic sorting for this purpose cost-effective, and that it would be overly burdensome and not practicable to prohibit recycling of decaBDE-containing plastic in the United States. EPA continues to expect, as mentioned in the 2021 response to comment document, that the amount of recycled plastic that contains decaBDE from recycled plastic to decline due to compliance with the prohibitions in the 2021 decaBDE final rule and as substitute flame retardants replace existing products that contained decaBDE (Ref. 33).

### 3. *Prohibit the release to water.*

EPA is proposing to prohibit the releases to water during the manufacturing, processing, and distribution in commerce of decaBDE, decaBDE-containing products, and all persons are required to follow any regulations that may apply and best management practices for preventing the release of decaBDE to water. Applicable regulations related this proposed prohibition on releases to water may include restrictions on discharges under the Federal Water Pollution Control Act (commonly known as the CWA)), Safe Drinking Water Act (SDWA), or analogous State laws. As mentioned in Unit II.A., after holding an additional tribal consultation, EPA received comments requesting the Agency prohibit releases of decaBDE to water (Ref. 28). Although EPA is aware of studies showing decaBDE in surface water, there have been no reported releases to water to the Toxics Release Inventory (TRI) since 2012 (Ref. 34). After reconsidering the practicability of prohibiting releases to water due to the tribe's comments, and the potential for releases to water, even though there are no reported such releases, EPA is proposing to prohibit the release to water to prevent any potential future releases of decaBDE and protect exposed populations (*e.g.*, subsistent fishers) (Ref. 16). EPA is requesting comments on additional details of how a prohibition on releases to water could best be achieved through best management practices, such as

engineering controls, process changes, work practices, emergency procedures, or other measures to prevent releases.

While it is EPA's understanding that releases of decaBDE to water are not occurring, prohibiting releases to water highlights the importance of preventing environmental releases of chemicals regulated by TSCA section 6(h) and reducing potential exposures. As mentioned in the Exposure and Use Assessment, TRI data show a decrease in releases that are reported in each industry sector using decaBDE. As of 2016, the number of manufacturing facilities, textile manufacturing facilities, and other facilities reporting TRI releases has decreased from several dozen to only one manufacturer and 23 other facilities (Ref. 16). Specifically, the one manufacturer that released to water prior to 2012, is now prohibited from manufacturing decaBDE under the 2021 decaBDE final rule. According to the most recent (2021) TRI data, there were zero releases of decaBDE to water (Ref. 34). TRI reporting is required only for facilities within specific NAICS codes who have 10 or more full-time employees, so it is possible that there were releases outside of the reporting requirements, but EPA believes this is unlikely. Prohibiting releases to water during manufacture, processing, and distribution in commerce of decaBDE and decaBDE-containing products would prevent future releases of decaBDE to the water from permissible ongoing activities, reducing the overall potential for exposures. While in some cases EPA has determined that it is not practicable to exercise its TSCA section 6(a) authorities to regulate certain exposures under TSCA section 6(h), as outlined in Unit II.B., this is not the case for releases of decaBDE to water.

EPA is not proposing to extend this requirement to include a prohibition on the release to water for the processing and distribution in commerce of decaBDE-containing articles, including recycled materials that may contain decaBDE, with the exception of plastics shipping pallets known to contain decaBDE. As described in more detail in the 2021 decaBDE final rule and the 2021 response to comment document, it would be extremely burdensome to identify articles containing decaBDE to determine if a facility that recycles articles is subject to this proposed release to water prohibition (Ref. 33).

4. *Extend the compliance extension for processing and distribution in commerce of decaBDE-containing wire and cables insulation for use in nuclear power generation facilities.*

DecaBDE has been used in Class 1E cables, which are qualified to meet industry standards and the Nuclear Regulatory Commission's (NRC) requirements in 10 CFR 50.49, "Environmental qualification of electric equipment important to safety for nuclear power plants," including the Institute of Electrical and Electronics Engineers 383 ("IEEE 383") standard for instrumentation and power cable insulation. Recognizing this, and in response to stakeholder feedback and engagements with the only known supplier of decaBDE-containing wire and cable, EPA established an extended compliance deadline of January 6, 2023, in the 2021 decaBDE final rule, after which all processing and distribution in commerce of decaBDE for use in wire and cable insulation in nuclear power generation facilities, and decaBDE-containing wire and cable insulation is prohibited (40 CFR 751.405(a)(2)(ii)). EPA interprets the term "nuclear power generation facilities" to include nuclear reactors as defined by the NRC in 10 CFR 50.2, production facilities, test and research reactors, other utilization facilities not specifically designed for or used primarily for the formation of plutonium or U-233, and reactors operated under the oversight of the Department of Energy and has added text to the exclusion in 40 CFR 751.405(a)(2)(ii) for clarification. In addition, EPA is clarifying that 40 CFR 751.405(a)(2)(ii) and new (a)(2)(vi) are not limited to a specific level of power generation and that the exclusion includes "electrical equipment important to safety" as defined in 10 CFR 50.49(b) and materials required for the safe operation of "Alternate ac source" and "Basic components" as defined in 10 CFR 50.2 which include decaBDE-containing wire and cable. EPA requests comment on if there are any additional points of clarification related to the description of the excluded activity.

After the January 6, 2023, extended compliance deadline in the 2021 decaBDE final rule, EPA received multiple requests and letters of concern regarding decaBDE in wire and cable insulation used in the nuclear power sector (Refs. 35 and 36). These inquiries and outreach came shortly after the supplier of this decaBDE-containing wire and cable discontinued processing and distribution in commerce and notified its customers of its inability to continue supplying their wire and cable due to the January 6, 2023, compliance date. Due to the lack of communication and engagement between the primary supplier and their customers, as well as

with EPA, the industry reported to EPA that they were at risk of not having qualified wire and cable available, which could negatively affect both scheduled maintenance outages and unplanned equipment failures and, ultimately, could force multiple nuclear power plants to be temporarily taken offline. In response to this, on April 20, 2023, EPA's Office of Chemical Safety and Pollution Prevention (OCSPP) requested that the Office of Enforcement and Compliance Assurance (OECA) issue an enforcement statement regarding certain entities that are subject to the prohibitions on processing and distribution in commerce of decaBDE-containing wire and cable insulation for nuclear power generation facilities as a bridge to a final rule addressing this use.

In response to this request, EPA's OECA issued a temporary "Enforcement Statement" on May 2, 2023, which indicates that the Agency does not intend to pursue enforcement for violations of the prohibition on processing and distribution in commerce of decaBDE-containing wire and cable insulation for nuclear power generation facilities, including those component and safety systems which contain the decaBDE-containing wire and cable insulation, that went into effect on January 6, 2023, as long as the entities involved are diligently working to qualify their alternative components in accordance with NRC regulations and guidance (Ref. 37).

After considering feedback from the industry and federal partners, including the U.S. Department of Energy and NRC, EPA is proposing to extend the compliance date, limited to processing and distribution in commerce of decaBDE-containing wire and cable insulation and the components containing the wire and cable in nuclear power generation facilities (including research and test reactors), until after the end of the service life of the wire and cable and the component containing the wire and cable (see 40 CFR 751.405(a)(2)(vi)). Stakeholders have indicated that existing decaBDE-containing wire and cable insulation and components containing the wire and cable may need to be distributed and processed for refurbishment, maintenance, and repair until the wire and cable is replaced. In addition, EPA's "Exposure and Use Assessment of Five Persistent, Bioaccumulative, and Toxic Chemicals" indicates that although releases of decaBDE could occur during the processing of decaBDE to make the wire and cable (Ref. 16), once formulated into the wire and cable, decaBDE is encased in the cured coating and the potential for worker exposure is

minimal (Ref. 16). Therefore, EPA concluded allowing this use to continue is necessary and practicable, while being unlikely to result in exposure to decaBDE.

EPA is not proposing to allow resumption of processing and distribution in commerce of raw or compounded decaBDE for use in wire and cable insulation in nuclear power generation facilities. The only known supplier of this has been permitted to resume these activities for a limited time under a settlement agreement that provides a mechanism for the continued availability of decaBDE-containing wire and cable insulation, while the nuclear power generation facilities industry undergoes transition to a decaBDE-free alternative (Ref. 38). The termination conditions of the settlement agreement states that it shall remain in place for five years following the effective date unless terminated earlier, while the company's customers Transition to receipt of Class 1E cable that is decaBDE-free.

#### *5. Require export notification for decaBDE-containing wire and cable for nuclear power generation facilities.*

As discussed in the 2021 decaBDE final rule, decaBDE is listed on Annex A of the Stockholm Convention on Persistent Organic Pollutants (the POPs Convention), which prohibits the production, use, import, and export of decaBDE and decaBDE-containing products and articles for Parties to the listing decision for decaBDE, unless otherwise subject to a specific exemption (Ref. 39). There is no specific exemption under the POPs Convention for decaBDE-containing wire and cable for nuclear power plant generation facilities, and thus, EPA did not expect import or export for this use to occur. However, EPA recently learned that there is a need for export of decaBDE-containing articles for this purpose. Therefore, although articles are generally exempt under 40 CFR 707.60(b) for notices of export under TSCA section 12(b), EPA is proposing to amend the current rule to require a TSCA section 12(b) export notice for export of decaBDE-containing wire and cable for nuclear power generation facilities. Such notice requirement is triggered 30 days after publication of this proposed rule, pursuant to TSCA section 12(b) and 40 CFR 707.65(a)(1)(i) and (b). The proposed notification to EPA of such intent to export would not provide consent by the importing countries for import of the shipment; the importing countries may choose not to permit import of such shipment. Consistent with subpart A of Part 751, the provisions of subpart D of 40 CFR

part 707 still apply to any export notifications required for decaBDE and PIP (3:1) under TSCA section 6(h). EPA is not requiring export notification for any other articles.

EPA is requesting comment on whether additional downstream notification requirements for products and articles known to contain decaBDE would reduce the potential for exposure to decaBDE. The downstream notification for which the Agency is requesting comment would include additional text in sections 1 and 15 of a safety data sheet (SDS) or specific language on the label of the decaBDE-containing product or article in question.

6. *Extend recordkeeping requirements from three to five years and remove timeframe to make records available.*

In the 2021 decaBDE final rule, EPA required that all persons who manufacture, process, or distribute in commerce decaBDE and products and articles containing decaBDE maintain ordinary business records related to compliance with the prohibitions and restrictions for three years and to make records available within 30-days upon request. EPA is proposing to increase the recordkeeping requirement from three to five years and to remove the 30-day timeframe to make records available for decaBDE and PIP (3:1). Due to the additional requirements being proposed in this rulemaking, specifically those pertaining to worker safety, EPA believes that the five-year timeframe regarding recordkeeping and removal of the 30-day timeframe to make records available is more appropriate. Furthermore, this is consistent with the timeframe associated with other TSCA section 6(a) rulemakings which include worker protection requirements. EPA believes extending each rule's recordkeeping requirement to a consistent five-year requirement will facilitate regulated entities' compliance with minimal impact to regulatory burden. In addition, removal of the 30-day time frame to make records available is critical to the Agency's ability to promptly identify and correct noncompliance. EPA believes that the regulated entities should have the records demonstrating compliance readily available.

*D. PIP (3:1)—Proposed Revisions to 40 CFR 751.407*

1. *Modify existing exclusions and add new exclusions.*

EPA reviewed the determinations underlying the exclusions from prohibition in the January 2021 PIP (3:1) final rule to consider whether to adopt new restrictions for activities currently

excluded, consistent with the statutory directive to reduce exposure to the extent practicable (Refs. 12 and 33). For many of the exclusions, EPA determined there were no technically feasible alternatives or that the time and cost to identify, research, and replace PIP (3:1) in supply chains were impracticable. During the comment period following the March 6, 2021, notification, many stakeholders from the auto, aerospace, semiconductor, heavy machinery, and other sectors provided additional information on time frames that they determined would allow those industries a reasonable period to transition from PIP (3:1) to alternatives (EPA-HQ-OPPT-2021-0202). Where EPA received information that transition from PIP (3:1) to an alternative has already occurred or could occur within a reasonable transition period, EPA proposes such modifications. In other instances, where commenters were not able to provide similar information for determining a reasonable period for such transition, EPA did not propose extending the phase-out deadline. EPA is requesting comment on the practicability of these proposed modifications.

a. *Description of the proposed regulatory action.* EPA is proposing to modify several exclusions from prohibition finalized in the January 6, 2021, PIP (3:1) final rule (Ref. 4). These proposed modifications include narrowing the scope of certain exclusions, adding prohibition phase-in dates, and in some cases creating new exclusions from prohibition for certain uses. In narrowing the scope of certain exclusions EPA is also proposing to prohibit the import of the PIP (3:1)-containing articles and PIP (3:1)-containing products for those uses. This is to restrict the ability for these prohibited PIP (3:1)-containing articles and PIP (3:1)-containing products for those uses to be imported where they are no longer allowed to be produced in the United States. EPA is not proposing to generally prohibit the manufacturing of PIP (3:1), consistent with the 2021 PBT rulemaking, due to the number of excluded activities which EPA has found it impracticable to prohibit.

i. *Lubricants and greases.*

EPA is proposing to narrow the exclusion from prohibition in 40 CFR 751.407(b)(1)(ii) for processing and distribution in commerce of PIP (3:1) for use in lubricants and greases, PIP (3:1)-containing products for use in lubricants and greases, and PIP (3:1)-containing lubricants and greases. Under this proposal, the exclusion from prohibition would be narrowed to allow only for the processing and distribution

in commerce of PIP (3:1), PIP (3:1)-containing products, and PIP (3:1)-containing lubricants and greases for use in aerospace and turbine applications. The processing and distribution in commerce of PIP (3:1), PIP (3:1)-containing products, and PIP (3:1)-containing lubricants and greases for all other uses, including but not limited to use in motor vehicles and industrial machinery, would be subject to a 5-year phased-in prohibition. EPA has acknowledged (Ref. 4) and continues to acknowledge the degree to which PIP (3:1) is a crucial anti-wear component for aerospace lubricants and greases, which is needed to perform at a wide range of temperatures and pressures. EPA understands there are some non-aerospace uses of these lubricants and greases where PIP (3:1) is a crucial anti-wear component, such as turbines used in power generation or in marine settings (Ref. 40). However, as discussed in the 2021 PIP (3:1) proposed rule (Ref. 12), uses in non-aircraft machinery and non-turbine equipment may not be subject to these same environmental stresses or safety and performance requirements from industry and government as the uses in the aerospace sector and turbines. As discussed in the 2020 Economic Analysis (Ref. 41), several potential chemical substitutes for PIP (3:1) exist. Three unique chemical substitutes of PIP (3:1) have been confirmed and an additional ten potential chemical substitutes have been identified, including some for non-aerospace and non-turbine lubricants and greases that are currently available on the market.

Following EPA's announcement to reconsider the PBT rules (Ref. 8), the Agency met with stakeholders to discuss their ongoing need for PIP (3:1)-containing lubricants and greases to meet performance standards and due to the lack of suitable alternatives. In addition, during the March 2021 notification and comment period, EPA received five comments either stating that no alternative existed or requesting the Agency maintain the existing exclusion for lubricants and greases. Two stakeholders indicated that they were working to identify alternatives to and/or eliminate PIP (3:1) from lubricant and grease formulation, while acknowledging for some applications they might not be able to find a replacement. At least one stakeholder requested a 5-year transition period to move away from PIP (3:1) for their applications (Ref. 42). Because there are available alternatives to the use of PIP (3:1) and given the absence of comment with specific information on the need

for PIP (3:1) to meet performance standards for non-aerospace, non-turbine lubricants and greases, EPA is proposing a 5-year phased-in prohibition. EPA is requesting comment on whether there are performance requirements that might impact compliance with this transition period, or whether there are other considerations that would impact EPA's conclusion that the phase-out is practicable, the suitability of alternatives to meet any performance requirements for non-aerospace and non-turbine uses, as well as the reasonableness of the proposed time period for the prohibition phase-in for those uses. In addition, EPA is requesting comment on the economic and technical feasibility of alternatives, and whether it would be practicable, where alternatives are not technically and economically feasible, to reduce exposures through worker protections alone. EPA is also requesting comment on whether the exclusion should be modified in another way, specifically as it relates to certain turbine uses.

ii. *New and replacement parts for motor vehicles.*

EPA is proposing to repeal the exclusion from prohibition for new and replacement parts for motor and aerospace vehicles in existing 40 CFR 751.407(b)(1)(iii). The aspects of this exclusion that relate to aerospace vehicles and wire harnessing and electric circuit boards are addressed in Unit III.D.1.a.iii and Unit III.D.1.a.iv, respectively. As to motor vehicles, EPA is proposing to repeal the existing exclusion at 40 CFR 751.407(b)(1)(iii) for use of PIP (3:1) and PIP (3:1)-containing products in new and replacement parts for motor vehicles and is proposing to replace it with a prohibition that would begin in 15 years. The proposed prohibition states that no later than 15 years from publication of the final rule, processing, and distribution in commerce of PIP (3:1), and the manufacturing, processing, and distribution in commerce of PIP (3:1)-containing products, for use in parts for new motor vehicles, including heavy machinery, and the parts to which PIP (3:1) has been added for such vehicles would be prohibited. Similarly, after such time, the manufacturing, processing, and distribution in commerce of new motor vehicles, including heavy machinery with PIP (3:1)-containing parts would be prohibited per 40 CFR 751.407(a)(2)(iv). This proposed prohibition would not apply to PIP (3:1)-containing parts that would be subject to a new exclusion, if adopted as proposed (e.g., wire harnesses and circuit boards).

Consistent with the discussion in the January 6, 2021, PIP (3:1) and decaBDE final rules, EPA continues to interpret TSCA section 6(c)(2)(D) to be inapplicable to TSCA section 6(h) rulemakings. Specifically, TSCA sections 6(c)(2)(D) and (E) require a risk finding pursuant to a TSCA section 6(b) risk evaluation to regulate replacement parts and articles. Yet, TSCA section 6(h) neither compels nor contemplates a risk evaluation to precede or support the compelled regulatory action to "address the risks . . ." and "reduce exposures to the substance to the extent practicable". While this interpretation has not changed, EPA has reviewed the practicability of regulating replacement parts and articles in accordance with the statutory directive in TSCA section 6(h)(4) to reduce exposures to the PBT chemicals to the extent practicable.

Stakeholders representing manufacturers of new original equipment and aftermarket components, systems, and materials for use in passenger cars and light trucks indicated that, under the assumption that an alternative to PIP (3:1) could be found in the next three to four years, the industry could transition out of using PIP (3:1) within a seven-to-ten-year time frame (Ref. 43). EPA acknowledges that the timeframe contains many contingencies, which could delay the adoption of PIP (3:1) alternatives. Nevertheless, based on the industry's own description of their experience with transitioning from a different chemical, albeit under different circumstances, and the time frames provided, EPA believes a 15-year phase-in prohibition of processing and distribution in commerce of PIP (3:1) and PIP (3:1)-containing products for use in parts for new motor vehicles (*i.e.*, newly produced vehicles) and a 30-year phase-in prohibition on processing and distribution in commerce for replacement parts and the motor vehicles with PIP (3:1)-containing parts, as discussed below, is practicable.

EPA is also proposing in new 40 CFR 751.407(a)(2)(v) to allow processing and distribution in commerce for an additional 15 years (*i.e.*, until 30 years after the publication date of the final rule) of PIP (3:1) and the manufacturing, processing, and distribution in commerce of PIP (3:1)-containing products for use in replacement parts for motor vehicles, including heavy machinery, the PIP (3:1)-containing replacement parts themselves for such vehicles, and such vehicles with PIP (3:1)-containing parts for 30 years after the publication date of the final rule. EPA's proposal does not impact the existing "end user" example at 40 CFR

751.401. EPA is proposing this 30-year period, to ensure that the option provided to vehicle manufacturers by 49 U.S.C. 30120 to remedy the defect or noncompliance by repairing the vehicle or the equipment (*i.e.*, part) remains available. EPA acknowledges that 49 U.S.C. 30120 does not require manufacturers to supply replacement parts, but rather to provide a remedy, which may include either replacing the equipment with identical or reasonably equivalent equipment, or by refunding the purchase price.

Lastly, as explained in the March 2022 PIP (3:1) final rule extending the PIP (3:1) compliance date, EPA generally interprets the term "motor vehicle" to mean a transport vehicle that is propelled or drawn by mechanical power, such as cars, trucks, motorcycles, boats, and construction, agricultural, and industrial machinery. EPA is proposing to include a reference to "heavy machinery" in the exclusion to clarify this.

iii. *New and replacement parts for aerospace vehicles.*

EPA is proposing to repeal the exclusion from prohibition for new and replacement parts for aerospace vehicles described currently in 40 CFR 751.407(b)(1)(iii). EPA is proposing to replace the exclusion from prohibition with a prohibition at 40 CFR 751.407(a)(2)(vi) that would begin 30 years after the publication of the final rule on the processing and distribution in commerce of PIP (3:1) and the manufacturing, processing, and distribution in commerce of PIP (3:1)-containing products, for use in parts installed in and distributed as part of new aerospace vehicles, and the parts to which PIP (3:1) has been added for such vehicles. In addition, EPA is proposing that, after the end of the aerospace vehicles' service lives, the importing, processing, and distribution in commerce, of aerospace vehicles (*i.e.*, those permissibly manufactured before the compliance timeframe ends) that contain PIP (3:1) in any part would be prohibited. EPA is also proposing at 40 CFR 751.407(a)(2)(vi) to prohibit manufacturing, processing, and distribution in commerce of PIP (3:1), PIP (3:1)-containing products for use in replacement parts, and PIP (3:1)-containing replacement parts, after the end of the aerospace vehicle service lives. These new prohibitions would not apply to PIP (3:1)-containing parts that would be subject to a new exclusion from prohibition, if adopted as proposed (e.g., wire harnesses and circuit boards).

As discussed in the January 2021 PIP (3:1) final rule, EPA concluded a similar reasoning applied to the use of PIP (3:1)

in new and replacement parts for motors vehicles readily transfers to a review of the justifications for the use of PIP (3:1) for new and replacement parts in aerospace vehicles. EPA acknowledges the regulatory and safety requirements for the aerospace industry are as stringent or more stringent than those for motor vehicles. In particular, industry stakeholders noted the time required to identify an alternative, and to test and certify its use in parts, to meet safety requirements, as well as a lengthy Federal Aviation Administration approval process. Given these considerations, EPA is proposing longer time periods for the phase-in prohibitions for the use of PIP (3:1) in new and replacement parts for aerospace vehicles. EPA request comment on the appropriateness of a 30-year time period for this phased-in prohibition or whether the length of time should be longer (*e.g.*, 40 years).

*iv. Wire harnesses and circuit boards.*

EPA is proposing a new exclusion from the prohibition at 40 CFR 751.407(b)(1)(iii) for the processing and distribution in commerce of PIP (3:1) and PIP (3:1)-containing products for use in wire harnesses and circuit boards containing PIP (3:1). This proposed exclusion is based on industry comments provided in response to the March 2021 notification opening a comment period. EPA has proposed that wire harnesses include a broad class of articles, including but not limited to terminal and fuse covers, cable sleeves, casings, connectors and tapes, used in a variety of applications, from defense to aerospace and motor vehicle applications, to medical instrumentation and more. In these articles, PIP (3:1) is used as a plasticizer and flame retardant. EPA also understands that PIP (3:1) use in electronic component manufacturing includes the use of PIP (3:1) in circuit boards as well as the use of PIP (3:1)-containing products for the encapsulation of electronics components added to circuit boards and as resins in overmolding, dip molding, insert molding applications, or conformal coatings. Hence, EPA is also proposing to exclude from prohibition the processing and distribution in commerce of PIP (3:1) and PIP (3:1)-containing products for use in circuit boards. Commenters have stated that these components, namely circuit boards and wire harnesses, are required to meet certain mandatory regulatory and voluntary industry safety standards (Refs. 44 and 45). According to commenters, alternatives to PIP (3:1) for use as a flame retardant and/or

plasticizer in wire harnesses and circuit boards have not been identified (Ref. 8).

Due to information from commenters and engagement with stakeholders, EPA is not aware of a replacement for PIP (3:1) for use in wire harnesses and circuit boards that combines its properties as a plasticizer, a fire retardant, and an anti-wear additive. Hence, EPA agrees with commenters that the replacement for PIP (3:1) in these uses would likely not be a direct substitute but might require multiple chemicals. EPA acknowledges that the process of replacing PIP (3:1) with separate chemicals for each function would likely be time consuming and costly to certify new end-use products and articles (Refs. 45 and 46). EPA is not aware of a technically and economically feasible alternative for PIP (3:1) that would meet the performance requirements and voluntary and regulatory safety standards for these articles. EPA and commenters are not aware of industry efforts to identify or qualify an alternative. For these reasons, EPA is proposing to determine that it is impracticable to prohibit the processing and distribution in commerce of PIP (3:1) for use in wire harnesses and circuit boards and PIP (3:1)-containing products for use in wire harnesses and circuit boards, and for wire harnesses and circuit boards containing PIP (3:1). EPA requests comment on the availability of potential alternatives for PIP (3:1) for use in wire harnesses and circuit boards that would ensure that these products and articles would meet performance requirements and voluntary and regulatory safety standards.

*v. Marine antifouling coating product.*

EPA is proposing, at new 40 CFR 751.407(a)(2)(vii), to add a five-year compliance deadline for the prohibition of processing and distribution of PIP (3:1) for use in a FIFRA-registered marine antifouling coating product for Department of Defense uses only. The January 2021 prohibition on processing and distribution of PIP (3:1) has resulted in the inability of the U.S. Navy to obtain a PIP (3:1)-containing FIFRA-registered marine antifouling coating product. This compliance date extension will allow the U.S. Navy to continue to procure PIP (3:1)-containing coating while it identifies an alternative PIP (3:1)-free formulation.

PIP (3:1) is used as a plasticizer in the formulation of the marine antifouling coating product and is an inert ingredient under FIFRA. In discussion with the U.S. Navy, it indicated that this antifouling coating falls under the “mission critical” category because hull corrosion on ships can have significant

impacts on ship performance. The U.S. Navy also indicated that it would need five years to develop a suitable alternative formulation and undergo U.S. Navy qualification and testing and the FIFRA approval process. Because no technically feasible alternative is currently available for the U.S. Navy’s aluminum-hulled ships due to the U.S. Navy’s specific performance requirements, EPA considers it impracticable to continue prohibiting the processing and distribution of PIP (3:1) for use in this marine antifouling coating product while an alternative is being developed. EPA believes there are suitable alternatives for commercial users, and so is limiting this exclusion to this U.S. Department of Defense application. EPA is proposing this new, 5-year compliance deadline under TSCA section 6(h), not TSCA section 6(g).

*vi. Manufacturing equipment and semiconductor manufacturing industry.*

Based on comments received after the March 16, 2021, notification and request for comments, EPA is proposing to revise 40 CFR 751.407(a)(2)(viii) to add a compliance deadline extension of 10 years for processing and distribution in commerce of certain PIP (3:1)-containing articles and the PIP (3:1) used to process those articles, namely for use in manufacturing equipment and in the semiconductor manufacturing industry. As discussed in Unit II.A.2., after the January 2021 PIP (3:1) final rule was published, a number of stakeholders from a variety of industrial sectors, including electronics and electrical manufacturing, semiconductor manufacturing, and manufacturing equipment, requested an extension of the compliance date to allow time to clear the existing articles through the supply chain, to find and certify an alternative chemical, and to produce or import new articles or complex goods that do not contain PIP (3:1) (Ref. 10). These stakeholders informed EPA of new information regarding the use of PIP (3:1) as a flame retardant and plasticizer in plastic components such as wire covers and casings. Other components that were identified include, but are not limited to, polyvinyl chloride tubes, harnesses, cables, covers, sleeves, and casings, as well as internal components of high-tech robotics and manufacturing equipment. Stakeholders have identified PIP (3:1) in components in scanning electron microscopes utilized in research, national laboratories, academia; in manufacturing and electronic components utilized for electronic design and assembly; and in electronics and semiconductor



manufacturing equipment (Ref. 44). Commenters also indicated that a wide range of key consumer and commercial goods were affected by the prohibitions in the 2021 PIP (3:1) final rule such as cellular telephones, laptop computers, and other electronic devices and industrial and commercial equipment used in various sectors including transportation, life sciences, and semiconductor production (Ref. 8, docket no., EPA-HQ-OPPT-2021-0202). EPA subsequently amended 40 CFR 751.407(a)(iii) to extend the compliance deadline for the phase-out of the processing and distribution in commerce of PIP (3:1) for use in articles and PIP (3:1)-containing articles until October 31, 2024 (Ref. 13).

EPA is now proposing to revise the compliance deadline at current 40 CFR 751.407(a)(2)(iii) to allow an additional 10 years for the processing and distribution in commerce of PIP (3:1) for use in articles and of PIP (3:1)-containing articles for use in manufacturing equipment and in semiconductor manufacturing. EPA is not proposing to further extend the existing October 31, 2024, compliance deadline for most other articles (see Unit III.D.4). EPA received stakeholder comments providing detailed information regarding timeframes to identify, replace, and recertify PIP (3:1)-containing articles in use within their often-complex supply chains and these comments suggest that a 10-year phase-out for use in manufacturing equipment and in semiconductor manufacturing is practicable and provides a reasonable transition period (Refs. 46, 47, and 48). EPA also received a comment in which a semiconductor industry stakeholder group stated that “[w]e have not learned of any situation where a reduction or elimination of PIP (3:1) or decaBDE was not technically possible” (Refs. 57). The commenter also stated that “we have found in our investigations that it is generally feasible for the suppliers of components containing PIP (3:1) or decaBDE to redesign the components for compliance.” However, this commenter also provided additional recommendations which EPA is taking comment on in Unit V. Several commenters note that there are difficulties in identifying PIP (3:1) in supply chains and additional time is needed to identify, test, certify, and adopt alternative parts, components, and finished products, as well as time to modify the manufacturing processes to accommodate an alternative substance. However, comments provide timeframes consistent with a 10-year period for transition and thus EPA does

not believe that a shorter time frame would be practicable or reasonable.

EPA is requesting comment on the scope and timeframe of this compliance date extension and the narrower scope of uses covered by this more limited extension beyond 2024. While EPA expects that in several industries, such as the textile (Ref. 51) and consumer product (Ref. 53) industries, the existing compliance timeframe for processing and distribution in commerce of PIP (3:1) for use in articles and PIP (3:1)-containing articles ending October 31, 2024 is sufficient, EPA also recognizes the challenges described by commenters with complex supply chains and the potential need for a longer compliance date extension in certain other industries and is choosing the ten year period as a practicable length of time during which the manufacturing equipment and semiconductor industries should be able to move to alternatives.

*b. Description of the primary alternative regulatory action.*

EPA is also considering longer phase-in timeframes for certain existing exclusions from prohibition. EPA considered a 30-year time limit on processing and distribution in commerce of PIP (3:1) and PIP (3:1)-containing products for use in lubricants and greases for aerospace and turbine applications, and PIP (3:1)-containing lubricants and greases for aerospace and turbine applications. As previously mentioned, stakeholders indicated that they were working to move away from the use of PIP (3:1), but that there could be applications where they might not be able to find a replacement. EPA is requesting comment on the timeframe needed to transition to PIP (3:1)-free lubricant and greases for this use and whether there are other industries, other than for aerospace and turbine applications, that may also need more time.

EPA also considered a longer phase-out timeframe of 20 years for the prohibition of processing and distribution in commerce of PIP (3:1) and PIP (3:1)-containing products for use in wire harnesses and electric circuit boards, manufacturing equipment, and in the semiconductor industry. The 2021 OCSPP request for a “No Action Assurance” (Ref. 49) outlines the many articles in which PIP (3:1) is used. In order to clear supply chains and ensure an effective transition to alternatives, EPA considered a 20-year transition period for these PIP (3:1) containing articles. Articles with an end use in new and replacement parts for vehicles would be excluded from this time limit.

*2. Require PPE during manufacturing and processing of PIP (3:1).*

EPA is proposing to require inhalation and dermal PPE during domestic manufacturing and processing of PIP (3:1) and certain PIP (3:1)-containing products and articles. As discussed in Unit II. and in this Unit III.C.2. for decaBDE, EPA believes there is potential for reduction in worker exposure to PIP (3:1) by requiring PPE where EPA is aware of employers in specific sectors that are already providing appropriate PPE to their employees. EPA is proposing PPE requirements to address potential respiratory and dermal exposure to occupational workers during certain ongoing domestic manufacturing or processing activities involving PIP (3:1), including those which EPA is proposing phase out periods. Because EPA generally believes the potential for exposure is low during importation, the Agency is not proposing to require worker protections for import of PIP (3:1) and PIP (3:1)-containing products and articles. The Agency is also not proposing to require worker protection for the processing of certain PIP (3:1)-containing products and articles: PIP (3:1)-containing adhesives and sealants, new and replacement parts to which PIP (3:1) has been added for motor and aerospace vehicles, and the motor and aerospace vehicles that contain new and replacement parts to which PIP (3:1) has been added, PIP (3:1)-containing specialized engine filters for locomotive and marine applications, and the products or articles described in 40 CFR 751.405 (b)(1)(vi) and (vii). EPA is also excluding processing of PIP (3:1) and PIP (3:1)-containing products for use as an intermediate to produce cyanoacrylate adhesives when contained in a closed system under new 40 CFR 751.407(f)(8)(iii). This is consistent with the practices of the one company using PIP (3:1) for this use and EPA believes it is protective due to proposed requirements under new 40 CFR 751.407(f)(6) which would address PIP (3:1) through engineering controls.

EPA is proposing to require implementation of a PPE program in alignment with certain elements of OSHA’s General Requirements for Personal Protective Equipment at 29 CFR 1910.132 and Respiratory Protection requirements in 29 CFR 1910.134. EPA is proposing to require owners and operators ensure each potentially exposed person who is required to wear PPE to use and maintain PPE in a sanitary, reliable, and undamaged condition. Owners and operators would be required to select and provide PPE that properly fits each

potentially exposed person who is required to use PPE and to communicate PPE selections (e.g., demonstration that each item of PPE selected provides prevents exposure during expected duration and conditions of exposure) to each affected person.

While EPA is proposing implementation of a PPE program in alignment with OSHA's, the Agency is also prescribing the level of PPE that must be worn based on the reasonably available information the Agency has regarding the adoption of those levels by industry. Where EPA is prescribing the use of PPE, the Agency is not supplanting OSHA requirements but clarifying the level of PPE that the Agency considers is practicable under TSCA section 6(h). For all activities covered under the worker protection proposed regulations, EPA is proposing that owners or operators be required to provide gloves that are chemically resistant to PIP (3:1) with activity-specific training where dermal contact with PIP (3:1) is possible. For the manufacturing and processing of PIP (3:1) and PIP (3:1)-containing products for use in new and replacement parts for motor vehicles, including heavy machinery, and aerospace vehicles, EPA is proposing respiratory protection which must be at least as protective as a NIOSH-approved N95 respirator (APF 10). For processing of PIP (3:1) and PIP (3:1)-containing products for use in the manufacturing of cyanoacrylate adhesives, EPA is proposing respiratory protection which must be at least as protective as a NIOSH-approved APF 50 respirator, except when the PIP (3:1) or PIP (3:1)-containing product is contained in a closed-system. For all other activities covered under the proposed PPE regulations, EPA is proposing respirators that are at least as protective as a NIOSH-approved APF 10 air-purifying half mask respirator. Based on stakeholder comments (Ref. 33) and OSHA-required Safety Data Sheets, EPA believes these levels of protection are already typically used as industry best practices, although the Agency lacks reasonably available information to determine the scale of adoption.

EPA is proposing that the owner or operator must ensure that all respirators used in the workplace are NIOSH-approved as listed on the NIOSH Certified Equipment List. In choosing appropriate gloves, EPA expects owners and operators would consider effectiveness of glove type when preventing exposures from PIP (3:1) alone and in likely combination with other chemical substances used in the work area, the degree of dexterity required to perform tasks, and the

temperature, as identified in the Hand Protection section of OSHA's Personal Protective Equipment guidance (Ref. 32).

EPA is proposing to require each owner or operator to comply with OSHA's general PPE training requirements at 29 CFR 1910.132(f) when using respirators and gloves. EPA is proposing that owners and operators would provide PPE training to each potentially exposed person who is required to wear PPE prior to or at the time of initial assignment to a job involving potential exposure to PIP (3:1).

EPA proposes to require that owners and operators document respiratory protection used and PPE program implementation and retain those records for five years. EPA proposes to require that owners and operators document in the PPE program the following information, as applicable, and make it available to the Agency upon request:

(A) The name, workplace address, work shift, job classification, and work area of each person reasonably likely to directly handle PIP (3:1) or handle equipment or materials on which PIP (3:1) may present and the type of PPE selected to be worn by each of these persons;

(B) The basis for PPE selection (e.g., demonstration based on permeation testing or manufacturer specifications that each item of PPE selected provides an impervious barrier to prevent exposure during expected duration and conditions of exposure, including the likely combinations of chemical substances to which the PPE may be exposed in the work area); and

(C) Appropriately sized PPE and training on proper application, wear, and removal of PPE, and proper care/disposal of PPE.

3. *Require engineering controls for processing of PIP (3:1) and PIP (3:1)-containing products as an intermediate processing aid in the manufacturing of cyanoacrylate adhesives.*

Based on information gathered during consultations with industry stakeholders (Ref. 50), EPA is proposing, at new 40 CFR 751.407(f)(6), to require engineering controls for the processing of PIP (3:1) as an intermediate processing aid in the manufacturing of cyanoacrylate adhesives. According to stakeholders, the production process using PIP (3:1) is carried out in an automated batch distillation plant and in a closed system.

EPA previously maintained that it was not practicable to prescribe engineering controls that were duplicative of those required under OSHA (OSHA 29 CFR 1910.134(a)(1)),

which requires the use of feasible engineering controls to prevent atmospheric contamination. As discussed in Unit II.B.4., for purposes of determining whether worker protection measures are practicable under TSCA section 6(h)(4), EPA no longer believes it is appropriate to assume as a general matter that an applicable OSHA requirement is consistently or always properly applied, and the Agency considered when worker protection measures higher up the NIOSH hierarchy of controls than PPE could practicably be required. For the processing of PIP (3:1) as an intermediate processing aid in the manufacturing of cyanoacrylate adhesives, EPA has reasonably available information submitted by an industry participant regarding the use of engineering controls. Based on that information, EPA is proposing to require engineering controls for the processing of PIP (3:1) as an intermediate processing aid in the manufacturing of cyanoacrylate adhesives such that the processing of PIP (3:1) must take place in a closed loop system with general and local exhaust ventilation provided. EPA believes that only one company is currently processing PIP (3:1) for this use, and the proposed engineering controls are the current practice of the company. Thus, there were no costs for this proposed requirement (Ref. 14). EPA is requesting comment on whether all processing of PIP (3:1) as an intermediate processing aid in the manufacturing of cyanoacrylate adhesives uses this type of system and the feasibility of the cyanoacrylate adhesive industry to implement engineering controls.

4. *Extend recordkeeping requirements from three to five years and remove timeframe to make records available.*

In the 2021 PIP (3:1) final rule, EPA required that all persons who manufacture, process, or distribute in commerce PIP (3:1) and products and articles containing PIP (3:1) maintain ordinary business records related to compliance with the prohibitions and restrictions for three years and to make records available within 30-days upon request. EPA is proposing to increase the recordkeeping requirement from three to five years and to remove the 30-day timeframe to make records available. Due to the additional requirements being proposed in this rulemaking, specifically those pertaining to worker safety, EPA believes that the five-year timeframe regarding recordkeeping and removal of the 30-day timeframe to make records available is more appropriate. Furthermore, this is consistent with the

timeframe associated with other TSCA section 6(a) rulemakings which include worker protection requirements. EPA believes extending each rule's recordkeeping requirement to a consistent five-year requirement will facilitate regulated entities' compliance with minimal impact to regulatory burden. In addition, removal of the 30-day timeframe to make records available is critical to the Agency's ability to promptly identify and correct noncompliance. EPA believes that regulated entities should have the records demonstrating compliance readily available.

#### **IV. The Reasonably Ascertainable Economic Consequences of the Proposed Rule**

##### *A. Overview of Cost Methodology*

EPA has evaluated the potential costs of the proposed rule. Industry costs may arise from implementing measures to protect from exposure or switching from the manufacture or use of the chemical to a substitute. These costs included: reformulation of prohibited products using alternative chemicals to manufacture the product, or the price differential of available substitute products that do not contain PIP (3:1), providing workers with the required personal protective equipment (*e.g.*, respirators, gloves, and/or goggles), product or article labeling to indicate that it contains the regulated chemical(s), rule familiarization and recordkeeping based on burdens estimated for other similar rulemakings. Costs were annualized over a 30-year period. Other potential costs include, but are not limited to, those associated with testing, release prevention, imported articles, and some portion of potential revenue loss.

##### *B. Estimated Costs of This Proposed Rule*

Total quantified annualized industry costs for the proposed rule are estimated to be \$389 million at a 3% discount rate and \$416 million at a 7% discount rate annualized over 30 years. Of the proposed rule costs, those associated with decaBDE alone were approximately \$1,700 at a 3% discount rate and \$1,800 at a 7% discount rate. Costs associated with PIP (3:1) were \$389 million and \$416 million (at 3 and 7% discount rates, respectively.) Of this total, worker protection (PPE) costs under the proposed regulatory option annualized at a 3% discount rate is \$355 million and \$392 million at a 7% discount rate with PIP (3:1) accounting for all costs. The reason for the large disparity in the costs between decaBDE

and PIP (3:1) results from the difference in the number of firms using each chemical under the proposed rule's regulated activities. There are only two firms known to be using decaBDE that would be impacted by the proposed rule. Substantially more firms (up to 19,018) could potentially be impacted by the PIP (3:1) proposed rule requirements based on the sectors impacted. Prohibition costs for PIP (3:1) annualized at a 3% discount rate were estimated at \$33 million and \$24 million annualized at a 7% discount rate. For the economic analyses for the 2021 PBT final rules, EPA estimated that it would need one full-time equivalent (FTE) employee for implementation (*e.g.*, compliance assistance and enforcement) activities under both the 2021 decaBDE and PIP (3:1) final rules (two FTE employees total). This proposed rule would modify the existing rules. Therefore, EPA does not expect that it will require any additional (incremental) Agency staff time to implement the rules under the proposed revisions (proposed or primary alternative options).

##### *1. Benefits.*

A qualitative discussion of the potential benefits associated with the proposed action for decaBDE and PIP (3:1) is provided. PIP (3:1) is a neurotoxicant and aquatic toxicant with high persistence and high potential for bioaccumulation. DecaBDE has been found to have an association with liver cancer and benign liver tumors in rats and mice and had hepatic, renal, immune, and reproductive toxicity concerns in animal studies. Research has also indicated that decaBDE is acutely toxic to fish and aquatic invertebrates. As a result of this proposed rule, prohibition and PPE requirements, EPA anticipates decreased potential for occupational exposures and reduced potential for exposures to the general population, potentially exposed or susceptible subpopulations, and the environment.

##### *2. Cost effectiveness and effect on national economy, small business, and technological innovation.*

With respect to the cost effectiveness of the proposed regulatory action and the primary alternative regulatory action, EPA is unable to perform a traditional cost-effectiveness analysis of the actions and alternatives for the PBT chemicals. As discussed in the proposed rule, the cost effectiveness of a policy option would properly be calculated by dividing the annualized costs of the option by a final outcome, such as cancer cases avoided, or to intermediate outputs such as tons of emissions of a pollutant curtailed. Without the

supporting analyses for a risk determination, EPA is unable to calculate either a health-based or environment-based denominator. Thus, EPA is unable to perform a quantitative cost-effectiveness analysis of the primary and alternative regulatory actions. However, by evaluating the practicability of the final and alternative regulatory actions, EPA believes that it has considered elements related to the cost effectiveness of the actions, including the cost and the effect on exposure to the PBT chemicals of the primary and alternative regulatory actions.

EPA considered the anticipated effect of this proposed rule on the national economy and concluded that this rule is highly unlikely to have any measurable effect on the national economy (Ref. 14). EPA analyzed the expected impacts on small business and found that no small entities are expected to experience impacts of more than 1% of revenues (Ref. 54). Finally, EPA has determined that this rule is unlikely to have significant impacts on technological innovation, although the rule may create some incentives for chemical manufacturers to develop new chemical alternatives to PIP (3:1).

#### **V. Request for Comments**

EPA requests comment on all aspects of this proposal, including the proposed regulatory actions, the compliance dates for all the actions in this proposal, the primary alternative regulatory actions, and any other options that EPA has considered or should consider for both decaBDE and PIP (3:1). EPA is requesting comment on whether the Agency's proposed regulatory actions achieve the statutory directives to "reduce exposure to the substance to the extent practicable" (15 U.S.C. 2605(h)(4)). In addition, as previously noted, EPA's understanding of the extent to which reductions in exposure might reduce risks for communities with EJ concerns is limited. EPA is therefore interested in any feedback or data that could aid in the quantification of human health impacts to exposed populations, in order to assess the extent to which impacts to communities with environmental justice concerns are reduced by the proposed rule.

EPA requests comment on the performance requirements and the suitability of alternatives to meet any performance requirements for non-aviation and non-turbine uses, as well as the reasonableness of the proposed time period for the prohibition phase-in for those uses. In addition, EPA requests comment on the economic and technical

feasibility of alternatives, and whether it would be practicable, where alternatives are not technically and economically feasible, to reduce exposures through worker protections alone. EPA is also requesting comment on whether the exclusion from prohibition could be further narrowed, specifically as it related to certain turbine uses.

EPA requests comment on the availability of potential alternatives for PIP (3:1) for use in wire harnesses and circuit boards that would ensure that these products and articles would meet performance requirements and voluntary and regulatory safety standards.

EPA is requesting comment on the scope and timeframe of the 10-year compliance date extension for processing and distribution in commerce of certain PIP (3:1)-containing articles and the PIP (3:1), and PIP (3:1) products used in those articles for use in manufacturing equipment and in the semiconductor manufacturing industry, including information on whether and why a longer timeframe or exclusion may be necessary especially for replacement parts in order to account for complex supply chains and to clear channels of trade.

In addition, in a more recent letter to EPA dated August 4, 2023, a semiconductor industry stakeholder group provided additional comments to EPA: including a recommendation that EPA adopt a threshold limit of no less than 0.001% for the presence of PIP (3:1) and 0.1% for the presence of decaBDE in articles, comments on EPA's interpretation of "article," a recommendation that EPA incorporate a manufactured-by approach to account for the complexity of the global supply chain and the time required to productize components compliant with the rule, and that EPA should incorporate an exclusion for semiconductor manufacturing and related equipment replacement parts (Ref. 57). EPA is also requesting comment on the availability of analytical test detection methods for PIP (3:1) and the practicability of implementing a testing program for the presence of PIP in products and articles. EPA has addressed a portion of these comments in the 2021 rulemaking. For example, EPA has addressed the request for an exclusion for PBTs present at low threshold limits as an unintentional contaminant or present as in *de minimis* quantities (independent of the exclusion for recycled plastics) reasoning that, where it is practicable to reduce exposures, the statute provides no such exceptions. EPA believes that there are any number of reasonable steps that can

be taken to determine whether a product or article is compliant with the PBT regulations, such as contract specifications that describe the chemicals that may not be used, or a statement from the supplier that the articles furnished do not contain specific prohibited chemicals. However, EPA is requesting comment on this as well as the others provided to EPA by this semiconductor stakeholder. EPA requests comment on amending the downstream notification requirement at 40 CFR 751.407(e) for PIP (3:1)-containing products to require language in the Safety Data sheet to notify workers using spray applications of the presence of PIP (3:1), or alternatively to require a warning or other label statement affixed to PIP (3:1)-containing products with spray applications. EPA requests comment on whether notification for workers using spray applications would reduce exposures, the practicability of such requirements, and what notification statements or warning labels would be effective at reducing exposures. This request for comment includes whether the notifications or warning labels should be available in multiple languages, if necessary (e.g., notice would be in a language that the potentially exposed person understands, including a non-English language version representing the language(s) of the largest group(s) of workers who cannot readily comprehend or read English).

EPA requests comment on whether additional downstream notification requirements for products and articles known to contain decaBDE would reduce the potential for exposure for decaBDE, and whether the labels for plastic pallets should also be required to be available in multiple languages if necessary. The downstream notification for which the Agency is requesting comment would include additional text in sections 1 and 15 of an SDS or specific language on the label of the product or article in question.

EPA also requests comment on all aspects of the Economic Analysis accompanying this action. In taking final action on this proposal, following review of comments, EPA may require exposure reductions beyond those proposed here, or may reduce the scope of the proposed exposure reductions.

## VI. 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. EPA. TSCA Work Plan for Chemical Assessments: 2014 Update. October 2014.
2. EPA. TSCA Work Plan Chemicals: Methods Document. February 2012.
3. EPA. Decabromodiphenyl Ether (DecaBDE); Regulation of Persistent, Bioaccumulative, and Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Final Rule. **Federal Register** (86 FR 880, January 6, 2021) (FRL-10018-87).
4. EPA. Phenol, Isopropylated Phosphate (3:1) (PIP (3:1)); Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Final Rule. **Federal Register** (86 FR 894, January 6, 2021) (FRL-10018-88).
5. EPA. 2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP); Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Final Rule. **Federal Register** (86 FR 866, January 6, 2021) (FRL-10018-90).
6. EPA. Hexachlorobutadiene (HCBD); Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Final Rule. **Federal Register** (86 FR 922, January 6, 2021) (FRL-10018-91).
7. EPA. Pentachlorothiophenol (PCTP); Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Final Rule. **Federal Register** (86 FR 911, January 6, 2021) (FRL-10018-89).
8. EPA. Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Phenol, Isopropylated Phosphate (3:1); Request for Comments. **Federal Register** (86 FR 14398, March 16, 2021) (FRL-10021-08).
9. Executive Order 13990. Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. **Federal Register** (86 FR 7037, January 25, 2021).
10. Letter to EPA from the Consumer Technology Association and the Information Technology Industry Council to EPA on March 15, 2021. Document No. EPA-HQ-OPPT-2021-0202-0015.
11. EPA. Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Phenol, Isopropylated Phosphate (3:1); Compliance Date Extension Final Rule. **Federal Register** (86 FR 51823, September 17, 2021) (FRL-6015.5-03-QCSPP).
12. EPA. Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Phenol, Isopropylated Phosphate (3:1); Further Compliance Date Extension Proposed Rule. **Federal Register** (86 FR 59684, October 28, 2021) (FRL-6015.6-01-QCSPP).

13. EPA. Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h); Phenol, Isopropylated Phosphate (3:1); Further Compliance Date Extension Final Rule. **Federal Register** (87 FR 12875, March 8, 2022) (FRL-6015.6-02-OCSP).
14. EPA. Economic Analysis for Regulation of Phenol, isopropylated phosphate (3:1) (PIP (3:1) and Decabromodiphenyl ether (DecaBDE) Under TSCA Section 6(h). November 2023.
15. EPA. 1995 Policy on Evaluating Health Risks to Children. [https://www.epa.gov/sites/default/files/201405/documents/1995\\_childrens\\_health\\_policy\\_statement.pdf](https://www.epa.gov/sites/default/files/201405/documents/1995_childrens_health_policy_statement.pdf).
16. EPA. Exposure and Use Assessment of Five Persistent, Bioaccumulative, and Toxic Chemicals. December 2020. (*For references and supporting documentation, see also EPA-HQ-OPPT-2019-0080*).
17. Comments submitted to EPA. Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h) on March 16, 2021. Docket ID: EPA-HQ-OPPT-2021-0202-0001.
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23. Stakeholder Comment from iGPS. January 2018.
24. EPA. Access Chemical Data Reporting: 2020 CDR Data. Last updated on May 16, 2022.
25. EPA. Exposure and Use Assessment of Five Persistent, Bioaccumulative, and Toxic Chemicals. June 2019.
26. Yurok Tribe. Public Comment Submitted to EPA RE: Comments on Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h) on May 17, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0077.
27. Norwegian Environmental Agency. Final Report. Literature Study—DecaBDE in Waste Streams. 2015.
28. Yurok Tribe. Letter to EPA RE: the Tribal Consultation on DecaBDE Risk Management Rule on January 3, 2023.
29. Comment submitted to EPA by the Truck and Engine Manufacturers Association (EMA) on October 29, 2019. Comment ID: EPA-HQ-OPPT-2019-0080-0550.
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33. EPA. Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h) RIN 2070-AK34; Response to Public Comments. December 2020.
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35. Placeholder: Letter from the Nuclear Regulatory Commission to the EPA on March 31, 2023. (EPA-HQ-OPPT-2023-0376).
36. Placeholder: Email from the Nuclear Energy Institute to the EPA on March 9, 2023, 2023. (EPA-HQ-OPPT-2023-0376).
37. EPA. Enforcement Statement Regarding the Prohibition of Processing and Distribution in Commerce of Decabromodiphenyl Ether (DecaBDE)-Containing Wire and Cable Insulation in Nuclear Power Generation Facilities under 40 CFR 751.405(a)(2)(ii). May 2, 2023. <https://www.epa.gov/system/files/documents/202305/Enforcement%20Statement%20Regarding%20DecaBDE%205%202023.pdf>.
38. EPA. 2023 DecaBDE Settlement: In the Matter of RSCC Wire & Cable LLC. Docket No. TSCA-HQ-2023-5006. May 1, 2023. [https://yosemite.epa.gov/oa/EAB\\_Web\\_Docket.nsf/Unpublished-Final-Orders/8A750189B8B8E14A852589A20072ACCC/\\$File/RSCC%20CAFO%20final%20order%202023.05.01%201510.pdf](https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/Unpublished-Final-Orders/8A750189B8B8E14A852589A20072ACCC/$File/RSCC%20CAFO%20final%20order%202023.05.01%201510.pdf).
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40. EPA. Stakeholder Meeting Notes with Akin Gump on September 27, 2018. Docket No. EPA-HQ-OPPT-2019-0080-0017.
41. EPA. Economic Analysis for Regulation of Phenol, Isopropylated Phosphate (3:1) (PIP (3:1)) Under TSCA Section 6(h). December 16, 2020.
42. Comment submitted to EPA from the National Elevator Industry, Inc. on March 24, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0131.
43. Comment submitted to EPA from the Motor & Equipment Manufacturers Association and the Alliance for Automotive Innovation on May 20, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0110.
44. Comment to EPA from the Consumer Technology Association, IPC, and Information Technology Industry Council on May 24, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0148.
45. Comment submitted to EPA from The Boeing Company on May 20, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0102.
46. Comment submitted to EPA from the Association of Equipment Manufacturers on May 14, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0053.
47. Comment submitted to EPA from SEMI and the Semiconductor Equipment Association of Japan on May 20, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0121.
48. Comment submitted to EPA from the Power Tool Institute, Inc. on May 18, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0067.
49. Comment submitted to EPA from Leonhardt Environmental, PC on May 6, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0035.
50. Comment submitted to EPA by Japan Agricultural Machinery Manufacturers Association on May 20, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0112.
51. Comment submitted to EPA by Chemical Users Coalition on May 24, 2021. Comment ID: EPA-HQ-OPPT-2021-0202-0135.
52. EPA. Letter from EPA's Office of Chemical Safety and Pollution Prevention to EPA's Office of Enforcement and Compliance Assurance RE: Request for No Action Assurance Regarding the Prohibition of Processing and Distribution of Phenol Isopropylated Phosphate (3:1), PIP (3:1), for Use in Articles and PIP (3:1) containing Articles under 40 CFR 751.407(a)(1). March 8, 2021. [https://www.epa.gov/sites/default/files/2021-03/documents/10021-08\\_memo\\_freedhoff\\_to\\_starfield\\_tsc\\_a\\_pip\\_31\\_naa\\_signed\\_2021-03-08.pdf](https://www.epa.gov/sites/default/files/2021-03/documents/10021-08_memo_freedhoff_to_starfield_tsc_a_pip_31_naa_signed_2021-03-08.pdf).
53. Comment submitted to EPA from Daniel D. Masakowski, Director of Materials Development, RSCC on the Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h) on January 29, 2020. Comment ID: EPA-HQ-OPPT-2019-0080-0583.
54. Keweenaw Bay Indian Community. Re: Notification of Consultation and Coordination on a Rulemaking Under the Toxic Substances Control Act: Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under TSCA Section 6(h). September 25, 2018.
55. Harper, Barbara and Rancho, Darren, in collaboration with the Maine Tribes. Wabanaki Traditional Cultural Lifeways Exposure Scenario. July 9, 2009. Referenced in the 2021 Final PBT Rule.
56. EPA. Supporting Statement for an Information Collection Request (ICR) under the Paperwork Reduction Act (PRA); Decabromodiphenyl Ether and Phenol, Isopropylated Phosphate (3:1); Revision to the Regulation of Persistent, Bioaccumulative, and Toxic Chemicals under the Toxic Substances Control Act (TSCA); Proposed Rule (RIN 2070-AL02). EPA ICR No. 2779.01 and OMB Control No. 2070-NEW. November 2023.

57. Comment submitted to EPA by SEMI on August 4, 2023. Comment ID; TBA

## VII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive orders can be found at <https://www.epa.gov/laws-regulations-and-executive-orders>.

### A. Executive Order 12866: Regulatory Planning and Review and Executive Order 14094: Modernizing Regulatory Review

This action is a “significant regulatory action” as defined in section 3(f)(1) of Executive Order 12866 (58 FR 51735, October 4, 1993), as amended by Executive Order 14094 (88 FR 21879, April 11, 2023). Accordingly, EPA, submitted this action to OMB for review under Executive Order 12866. Documentation of any changes made in response to the Executive Order 12866 review is available in the docket.

EPA prepared an economic analysis of the potential costs and benefits associated with this proposed rule (Ref. 14). A copy of this economic analysis is also available in the docket and is briefly summarized in Unit I.E. and discussed in Unit IV.

### B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document that EPA prepared has been assigned EPA ICR No. 2779.01 (Ref. 56). You can find a copy of the ICR in the docket for this rulemaking and it is briefly summarized here.

*Respondents/affected entities:* See Unit I.A.

*Respondent's obligation to respond:* Mandatory under TSCA section 6(h) and 40 CFR 751.407.

*Estimated number of respondents:* 19,020 (13,550 manufacturers/importers/processors, and 5,470 distributors).

*Frequency of response:* On occasion.

*Total estimated burden:* 34,497 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost:* \$2,640,103 (per year), includes \$0 annualized capital or operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the

accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to EPA using the docket identified at the beginning of this rule. EPA will respond to any ICR-related comments in the final rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs using the interface at <https://www.reginfo.gov/public/do/PRAMain>. Find this ICR by selecting “Currently under Review—Open for Public Comments” or by using the search function. OMB must receive comments no later than December 26, 2023.

### C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA, 5 U.S.C. 601, *et seq.* The small entities subject to the requirements of this action are small businesses that manufacture/import, process, or distribute the chemicals subject to this proposed rule. The Agency has determined that this proposed rule, if finalized, would impact approximately 16,205 small businesses of which 1,399 are expected to incur cost impacts between 1% and 3% of their annual revenue, all of which were for PIP (3:1) and none for decaBDE. The cost per small entity ranged from \$4,254 to \$1,134,821 (with an average of \$124,650) at a 3% discount rate and ranged from \$4,227 to \$1,134,786 (with an average of \$124,651, at a 7% discount rate). No entities for either chemical are expected to be impacted above 3% of their annual revenue. Details of this analysis are presented in the Economic Analysis (Ref. 14), which is in the public docket for this action.

### D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The requirements of this proposed rule are not expected to affect state, local, or Tribal governments because the rule impacts only entities that manufacture (including import), process, distribute in commerce, use, or dispose decaBDE and PIP (3:1), and government entities are not engaged in these activities.

### E. Executive Order 13132: Federalism

This action does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it will not have substantial direct effects on the 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.

### F. 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 substantial direct effects 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.

Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the Agency consulted with tribal officials during the development of this action. EPA consulted with representatives of Tribes via teleconference on August 31, 2018, and September 6, 2018, concerning the prospective regulation of these five PBT chemicals under TSCA section 6(h). Tribal members were encouraged to provide additional comments after the teleconferences. EPA received two comments from the Keweenaw Bay Indian Community and Maine Tribes (Refs. 54 and 55). EPA also met with the National Tribal Toxics Council (NTTC) in Washington, DC. During the NTTC meeting, the Agency provided background information on the available regulatory options under 6(a) and a summary of the information gathered on the five PBT chemicals. Officials from NTTC expressed support for EPA regulations to reduce exposures to the general population and susceptible subpopulations. On November 7, 2022, EPA held a one-on-one tribal consultation with the Yurok Tribal Council, where the Agency received additional information that informed the Agency of considerations to reduce potential exposures to decaBDE, a summary of this consultation is provided in Unit II.A.2.

### G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) directs federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is subject to Executive Order 13045

because it is a significant regulatory action under section 3(f)(1) of Executive Order 12866, and the EPA believes that the environmental health or safety risk addressed by this action may have a disproportionate effect on children. While EPA believes that this action addresses the health and environmental risks presented by the PBT chemicals subject to this action that may have a disproportionate effect on children, EPA did not perform a risk assessment or risk evaluation of these PBT chemicals. However, the proposed requirements would reduce potential exposure to these PBT chemicals for the general population and for susceptible subpopulations such as workers and children. EPA's evaluation of the exposure potential of these PBT chemicals (Ref. 16) and summary of the health and environmental hazards that may be presented by these chemical substances (Ref. 20) are in the docket. In addition, as briefly discussed in Unit I.E.5., EPA's Policy on Children's Health also applies to this action. See also the other discussions about the risks presented by the PBT chemicals subject to this action that are provided throughout this preamble.

#### H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy

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 a significant adverse effect on the supply, distribution or use of energy.

#### I. National Technology Transfer and Advancement Act (NTTAA)

This action does not involve technical standards under the NTTAA section 12(d), 15 U.S.C. 272.

#### J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations and Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All

EPA believes that it is not practicable to assess whether this action is likely to result in new disproportionate impacts or exacerbate any existing disproportionate impacts on communities with EJ concerns in accordance with Executive Order 12898 (59 FR 7629, February 16, 1994) and Executive Order 14096 (88 FR 25251, April 26, 2023). Since a risk evaluation was not conducted, EPA's understanding of the extent to which reductions in exposure might reduce risks for communities with

environmental justice concerns is limited. Data are not sufficiently comprehensive to estimate the extent to which the proposed rule would reduce existing disproportionate impacts on communities with EJ concerns. Data on the worker composition of affected industries, presented in Sections 6.5.1 and 6.5.2 of the Economic Analysis (Ref. 14), provides a general indication of how different demographic groups in the worker population may be affected. Certain exclusions and extensions of compliance dates beyond the onset of the rule may partially delay addressing these impacts. EPA believes that the restrictions that would be placed on decaBDE and PIP (3:1) with adoption of this proposed rule would reduce the potential exposures, and therefore, reduce any potential risks, associated with the manufacture, processing and use of these chemicals. EPA cannot confirm which specific subpopulations are at a disproportionate risk from exposure nor make a quantified estimate of the change in exposure that will result from the rule. In addition, only a small subset of the specific facilities using decaBDE and PIP (3:1) have been identified, so a proximity analysis examining the characteristics of the communities surrounding the known facilities might not be representative of all exposed communities. Some workers will receive PPE with adoption of the rule, while others will no longer be exposed to decaBDE and PIP (3:1). As companies reformulate with chemical alternatives, some workers may be exposed to these alternatives. Local communities will be also less exposed to decaBDE and PIP (3:1), though exposure to chemical alternatives may increase. EPA does not know which chemical alternatives industry will ultimately use. Some alternatives are less toxic and some are comparably toxic to decaBDE and PIP (3:1).

#### List of Subjects 40 CFR Part 751

Environmental protection, Chemicals, Export Notification, Hazardous substances, Import certification, Reporting and recordkeeping.

**Michael S. Regan,**  
Administrator.

Therefore, for the reasons set forth in the preamble, EPA proposes to amend 40 CFR chapter I as follows:

#### PART 751—REGULATION OF CERTAIN CHEMICAL SUBSTANCES AND MIXTURES UNDER SECTION 6 OF THE TOXIC SUBSTANCES CONTROL ACT

■ 1. The authority citation for part 751 continues to read as follows:

**Authority:** 15 U.S.C. 2605, 15 U.S.C. 2625(l)(4).

■ 2. Amend § 751.403 by adding in alphabetical order the term "regulated area" to read as follows:

#### § 751.403 Definitions.

\* \* \* \* \*

*Regulated area* means an area established by the regulated entity to demarcate areas where airborne concentrations or direct dermal contact of a specific chemical substance can reasonably be expected.

\* \* \* \* \*

■ 3. Amend § 751.405 by:  
 ■ a. Revising paragraph (a)(2)(ii);  
 ■ b. Adding paragraphs (a)(2)(vi);  
 ■ c. Revising paragraphs (c)(1)(i) and (iii); and  
 ■ d. Adding paragraphs (d), (e), (f), and (g).

The revision and additions read as follows:

#### § 751.405 DecaBDE.

(a) \* \* \*

(2) \* \* \*

(ii) After January 6, 2023, all persons are prohibited from all processing and distribution in commerce of decaBDE for use in wire and cable insulation in nuclear power generation facilities (including research and test reactors).

\* \* \* \* \*

(vi) After the end of the wire and cables' service life, all persons are prohibited from all processing and distribution in commerce of decaBDE-containing wire and cable insulation for nuclear power generation facilities (including research and test reactors).

\* \* \* \* \*

(c) \* \* \*

(1) \* \* \*

(i) These records must be maintained for a period of five years from the date the record is generated.

\* \* \* \* \*

(iii) These records must be made available to EPA upon request.

\* \* \* \* \*

(d) *Labeling.*

(1) After [DATE 1 YEAR AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], all persons who process, including recycle, plastic shipping pallets that are known to contain decaBDE must securely attach a label to each pallet. For purposes of this section, "securely attach" shall mean that a label can reasonably be expected to remain affixed during the foreseeable conditions and period of use. Each label must show clearly, prominently, and in an easily readable font size the following text:

This shipping pallet contains decabromodiphenyl ether (decaBDE) (CASRN

1163–19–5), a chemical that has been identified as persistent, bioaccumulative, and toxic (PBT) by the U.S. Environmental Protection Agency. All persons who recycle or process this pallet are required to wear personal protective equipment, per regulations at 40 CFR 751.405(e). The use of decaBDE is restricted under 40 CFR 751.405, all persons are prohibited from all manufacturing (including importing), processing, or distribution in commerce of decaBDE or decaBDE-containing products or articles, except for select uses, including those for plastic shipping pallets at 40 CFR 751.405(a)(2)(v) and (b). After the end of the pallets' service life, all persons are prohibited from all distribution in commerce of plastic shipping pallets that contain decaBDE and were manufactured prior to March 8, 2021.

(e) *Workplace protection.*

(1) *Applicability.* After [DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], the provisions of paragraph (e) of this section apply to any workplaces, engaged in manufacturing and processing of decaBDE and decaBDE-containing products and articles, except for those identified in paragraph (e)(7) of this section.

(2) *Regulated areas.* Owners or operators must establish and maintain regulated areas as defined in 40 CFR 751.403 wherever a potentially exposed person's exposure to airborne concentrations or direct dermal contact of decaBDE can reasonably be expected.

(i) The owner or operator must limit access to regulated areas to authorized persons.

(ii) The owner or operator must demarcate regulated areas from the rest of the workplace in a manner that adequately establishes and alerts persons to the boundaries of the regulated area and minimizes the number of authorized persons exposed to decaBDE within the regulated area.

(iii) The owner or operator must supply a respirator that complies with the requirements of paragraph (e) of this section and must ensure that all persons within the regulated area are using the provided respirators whenever exposures to airborne concentrations of decaBDE can reasonably be expected.

(iv) The owner or operator must ensure that while persons are wearing respirators in the regulated area, they do not engage in activities which interfere with respirator seal or performance.

(v) Whenever any direct dermal contact with decaBDE may occur within the regulated area the owner or operator must supply and ensure all persons are using dermal PPE that complies with the requirements of paragraph (e) of this section.

(vi) The owner or operator must ensure that, within a regulated area,

persons do not engage in non-work activities that may increase exposure to decaBDE.

(3) *Respiratory protection.* The owner or operator must provide respiratory protection to all potentially exposed persons in the regulated area as demarcated in accordance with paragraph (e)(2) of this section, and according to the provisions outlined in 29 CFR 1910.134(a) through (l) and as specified in this paragraph for potentially exposed persons to decaBDE during expected time of use.

(i) The type of respiratory protection that regulated entities must select and provide to potentially exposed persons must be at least as protective as a NIOSH-approved N95 respirator (APF 10).

(ii) [Reserved]

(4) *Dermal protection.* Owners or operators must require the donning of gloves that are chemically resistant to decaBDE with activity-specific training where dermal contact with decaBDE is possible.

(5) *Training.* The owner or operator must provide PPE training in accordance with 29 CFR 1910.132(f) to all persons required to use PPE under this subsection. The training shall be provided prior to or at the time of initial assignment to a job involving potential exposure to decaBDE.

(6) *Workplace protection records.* (i) The owner or operator subject to the requirements described in this section must retain records of:

(A) The name, workplace address, work shift, job classification, work area of each person reasonably likely to directly handle decaBDE or handle equipment or materials on which decaBDE may be present, the type of PPE selected by the owner or operator for use by each of these persons, the respiratory protection used by each potentially exposed person, and PPE program implementation, including fit-testing and training;

(B) The basis for PPE selection (e.g., demonstration based on permeation testing or manufacturer specifications that each item of PPE selected provides an impervious barrier to prevent exposure during expected duration and conditions of exposure, including the likely combinations of chemical substances to which the PPE may be exposed in the work area); and

(C) Appropriately sized PPE and training on proper application, wear, and removal of PPE, and proper care/disposal of PPE.

(ii) These records must be maintained for a period of five years from the date the record is generated.

(iii) These records must be made available to EPA upon request.

(7) *Exclusions.* The following are not subject to the provision of paragraph (e) of this section:

(i) Import of decaBDE and decaBDE-containing products and articles.

(ii) Processing for recycling of decaBDE-containing plastic from products or articles and decaBDE-containing products or articles made from such recycled plastic, where no new decaBDE is added during the recycling or production processes, except for those identified in paragraph (a)(2)(v) of this section.

(iii) Processing addressed in paragraph (a)(2)(vi) of this section of decaBDE-containing wire and cable insulation for use in nuclear power generation facilities.

(iv) Processing of new and replacement parts to which decaBDE has been added for motor and aerospace vehicles, and the motor and aerospace vehicles that contain new and replacement parts to which decaBDE has been added.

(f) *Export notification for decaBDE-containing products and articles.* After [DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], all persons intending to export decaBDE-containing wire and cable for nuclear power generation facilities (including research and test reactors) are required to notify EPA under TSCA section 12(b) and the provisions of subpart D of 40 CFR part 707. The exemption at 40 CFR 707.60(b) does not apply to decaBDE-containing wire and cable for nuclear power generation facilities.

(g) *Prohibition on releases to water.* After [DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], all persons are prohibited from releasing decaBDE to water during manufacturing, processing, and distribution in commerce of decaBDE, decaBDE-containing products, and all persons are required to follow any applicable regulations and best management practices for preventing the release of decaBDE.

■ 4. Amend § 751.407 by:

■ a. Revising paragraphs (a)(2)(iii) and adding paragraphs (a)(2)(iv) through (ix); and

■ b. Revising paragraphs (b)(1)(ii) and (iii), (d)(1) and (3); and

■ c. Adding paragraph (f).

The revisions and additions read as follows:

§ 751.407 PIP (3:1).

(a) \* \* \*

(2) \* \* \*

(iii) After October 31, 2024, except as provided in paragraphs (a)(2)(ii),



(a)(2)(ix), and (b) of this section, all persons are prohibited from all processing and distribution in commerce of PIP (3:1) for use in articles and PIP (3:1)-containing articles.

(iv) After [DATE 5 YEARS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], except as provided in paragraph (b)(1)(ii) of this section, all persons are prohibited from all processing and distribution in commerce of PIP (3:1) and manufacturing, processing, and distribution of PIP (3:1)-containing products for use in lubricants and greases and PIP (3:1)-containing lubricants and greases.

(v) After [DATE 15 YEARS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], all persons are prohibited from all processing and distribution in commerce of PIP (3:1) for use in parts for new motor vehicles, including heavy machinery, and manufacturing, processing, and distribution in commerce of PIP (3:1)-containing products for use in parts for new motor vehicles, including heavy machinery, PIP (3:1)-containing parts for such new vehicles, and the new motor vehicles, including heavy machinery in any parts.

(vi) After [DATE 30 YEARS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], all persons are prohibited from all processing and distribution in commerce of PIP (3:1) and manufacturing, processing, and distribution in commerce of PIP (3:1)-containing products for use in replacement parts for motor vehicles, including heavy machinery, PIP (3:1)-containing replacement parts, and the motor vehicles, including heavy machinery, that contain such replacement parts.

(vii) After [DATE 30 YEARS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], all persons are prohibited from all processing and distribution in commerce of PIP (3:1) and manufacturing, processing, and distribution in commerce of PIP (3:1)-containing products for use in parts installed in and distributed as part of new aerospace vehicles, and PIP (3:1)-containing parts for such vehicles. After the end of the aerospace vehicles service lives, all persons are prohibited from all importing, processing, and distribution in commerce of aerospace vehicles manufactured before [DATE 30 YEARS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**] that contain PIP (3:1) in any part. After the end of the aerospace vehicles service lives, all persons are prohibited from all manufacturing, processing, and distribution in commerce of PIP (3:1)

and PIP (3:1)-containing products for use in replacement parts for aerospace vehicles, and the replacement parts to which PIP (3:1) has been added for such vehicles.

(viii) After [DATE 5 YEARS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], all persons are prohibited from processing and distribution in commerce of PIP (3:1) and manufacturing, processing, and distribution in commerce of PIP (3:1)-containing products for use in marine antifouling coating products that are registered under the Federal, Insecticide, Fungicide, Rodenticide Act and that meet U.S. Department of Defense specification requirements.

(ix) After November 25, 2033, all persons are prohibited from processing, and distribution in commerce of PIP (3:1), and manufacturing, processing, and distribution of PIP (3:1)-containing products and articles for use in manufacturing equipment and in the semi-conductor industry.

\* \* \* \* \*

(b) \* \* \*

(1) \* \* \*

(ii) PIP (3:1) for use in lubricants and greases for aerospace and turbine uses, PIP (3:1)-containing products for use in lubricants and greases for aerospace and turbine use, and PIP (3:1)-containing lubricants and greases for aerospace and turbine uses;

(iii) PIP (3:1) and PIP (3:1)-containing products for use in circuit boards and wire harnesses, including but not limited to terminal and fuse covers, cable sleeves, casings, connectors and tapes, and PIP (3:1)-containing circuit boards and wire harnesses including but not limited to terminal and fuse covers, cable sleeves, casings, connectors and tapes;

\* \* \* \* \*

(d) \* \* \*

(1) After March 8, 2021, Persons who manufacture, process, or distribute in commerce PIP (3:1) or PIP (3:1)-containing products or articles must maintain ordinary business records, such as invoices and bills-of-lading, related to compliance with the prohibitions, restrictions, and other provisions of this section. These records must be maintained for a period of five years from the date the record is generated.

\* \* \* \* \*

(3) These records must be made available to EPA upon request.

\* \* \* \* \*

(f) *Workplace protection.*

(1) *Applicability.* After January 23, 2024, the provisions of this paragraph (f) apply to workplaces engaged in the

manufacturing and processing of PIP (3:1) and PIP (3:1)-containing products and articles, except as provided in paragraph (f)(8) of this section.

(2) *Regulated areas.* Owners or operators must establish and maintain regulated areas as defined in 40 CFR 751.403 wherever a potentially exposed person's exposure to airborne concentrations or direct dermal contact of PIP (3:1) can reasonably be expected.

(i) The owner or operator must limit access to regulated areas to authorized persons.

(ii) The owner or operator must demarcate regulated areas from the rest of the workplace in a manner that adequately establishes and alerts persons to the boundaries of the regulated area and minimizes the number of authorized persons exposed to PIP (3:1) within the regulated area.

(iii) The owner or operator must supply a respirator that complies with the requirements of paragraph (f) of this section and must ensure that all persons within the regulated area are using the provided respirators whenever exposures to airborne concentrations of PIP (3:1) can reasonably be expected.

(iv) The owner or operator must ensure that while persons are wearing respirators in the regulated area, they do not engage in activities which interfere with respirator seal or performance.

(v) Whenever any direct dermal contact with PIP (3:1) may occur within the regulated area the owner or operator must supply and ensure all persons are using dermal PPE that complies with the requirements of paragraph (f) of this section.

(vi) The owner or operator must ensure that, within a regulated area, persons do not engage in non-work activities that may increase exposure to PIP (3:1).

(3) *Respiratory protection.* The owner or operator must provide respiratory protection to all potentially exposed persons in the regulated area as demarcated in accordance with paragraph (f)(2) of this section, and according to the provisions outlined in 29 CFR 1910.134(a) through (l) and as specified in this paragraph for potentially exposed persons to PIP (3:1) during expected time of use.

(i) The type of respiratory protection that regulated entities must select and provide to potentially exposed persons must be at least as protective as a NIOSH-approved APF 10 air-purifying half mask respirator except for those uses identified in paragraph (f)(3)(ii) and (iii) of this section.

(ii) The type of respiratory protection that regulated entities must select and provide to potentially exposed persons

must be at least as protective as a NIOSH-approved N95 respirator (APF 10) for the manufacturing and processing of PIP (3:1), and PIP (3:1)-containing products for use in new and replacement parts for motor vehicles, including heavy machinery, and aerospace vehicles.

(iii) The type of respiratory protection that regulated entities must select and provide to potentially exposed persons must be at least as protective as a NIOSH-approved APF 50 purifying respirator for use as an intermediate to produce cyanoacrylate adhesives when PIP (3:1) and PIP (3:1)-containing products are not contained in a closed system (*i.e.*, except as described in paragraph (f)(8)(iii) of this section).

(4) *Dermal protection.* Owners or operators must require the donning of gloves that are chemically resistant to PIP (3:1) with activity-specific training where dermal contact with PIP (3:1) is possible.

(5) *Training.* The owner or operator must provide PPE training in accordance with 29 CFR 1910.132(f) to all persons required to use PPE under this subsection. The training shall be provided prior to or at the time of initial assignment to a job involving potential exposure to PIP (3:1).

(6) *Engineering controls.* Owners or operators manufacturing cyanoacrylate adhesives using PIP (3:1) as an

intermediate processing aid must use the following engineering controls:

(i) Must take place in a closed loop system, and

(ii) General and local exhaust ventilation must be provided.

(7) *Workplace protection records.*

Owners or operators subject to requirements described in this section must retain records of:

(A) The name, workplace address, work shift, job classification, work area of each person reasonably likely to directly handle PIP (3:1) or handle equipment or materials on which PIP (3:1) may be present, the type of PPE selected to be worn by each of these persons, the respiratory protection used by each potentially exposed person and PPE program implementation, including fit-testing and training;

(B) The basis for PPE selection (*e.g.*, demonstration based on permeation testing or manufacturer specifications that each item of PPE selected provides an impervious barrier to prevent exposure during expected duration and conditions of exposure, including the likely combinations of chemical substances to which the PPE may be exposed in the work area); and

(C) Appropriately sized PPE and training on proper application, wear, and removal of PPE, and proper care/disposal of PPE.

(ii) These records must be maintained for a period of five years from the date the record is generated.

(iii) These records must be made available to EPA upon request.

(8) *Exclusions.*

(i) Import of PIP (3:1) and PIP (3:1)-containing products and articles are not subject to the provision of paragraph (f) of this section.

(ii) Processing of certain PIP (3:1)-containing products and articles: PIP (3:1)-containing adhesives and sealants, new and replacement parts to which PIP (3:1) has been added for such motor and aerospace vehicles, and the motor and aerospace vehicles that contain new and replacement parts to which PIP (3:1) has been added, PIP (3:1)-containing specialized engine filters for locomotive and marine applications, and the products or articles described in paragraph (b)(1)(vi) and (vii) of this section are not subject to the provisions of paragraph (f) of this section.

(iii) Processing of PIP (3:1) and PIP (3:1)-containing products for use as an intermediate to produce cyanoacrylate adhesives when PIP (3:1) and PIP (3:1)-containing products are contained in a closed system as described in paragraph (f)(6) of this section are not subject to the provision of paragraph (f)(3) and (4) of this section.

\* \* \* \* \*

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