

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Comments of Safer Chemicals Healthy Families, Environmental Health Strategy Center, Earthjustice and Natural Resources Defense Council on EPA's Proposed Rule Regulating Persistent, Bioaccumulative and Toxic Chemicals Under TSCA Section 6(h)

Submitted via Regulations.gov (October 28, 2019)

Docket ID EPA-HQ-OPPT-2019-0080

Safer Chemicals Healthy Families (SCHF), Environmental Health Strategy Center, Earthjustice and Natural Resources Defense Council submit these comments on EPA's proposed rule regulating persistent, bioaccumulative and toxic (PBT) chemicals under Section 6(h) of the Toxic Substances Control Act (TSCA)¹. Our organizations are national and state groups committed to assuring the safety of chemicals used in our homes, workplaces and the many products to which our families and children are exposed each day. We took a leadership role during the TSCA legislative process, advocating the most protective and effective legislation possible to reduce the risks of toxic chemicals in use today. We strongly support a proactive approach to implementing the new law that uses the improved tools that Congress gave EPA to deliver significant health and environmental benefits to the American public.

Added to the law in the 2016 Lautenberg Chemical Safety Act (LCSA), section 6(h) is an important enhancement of EPA's TSCA authorities. It is based on the long-standing recognition by the scientific community, EPA and international bodies of the special dangers that PBTs pose to people and ecosystems as a result of their long-term presence, broad distribution and accumulation in living organisms and the natural environment. The widespread harm caused by Per- and Polyfluoroalkyl Substances (PFAS) chemicals is only the latest example of the consequences of not restricting PBTs before they become pervasive in the economy. To address these dangers, section 6(h) creates a fast-track process for stringently restricting manufacture, use and disposal of chemicals determined by EPA to have PBT characteristics. These restrictions must reduce exposure to these PBTs to the extent practicable, thereby limiting further build-up in the environment and biota and the harmful long-term consequences that will result.

Congress framed the requirements of section 6(h) so that EPA could act expeditiously based on the presumption that chemicals determined to be PBTs are harmful to human health and the environment and must be restricted without further risk evaluation or analysis of costs and benefits. Given the overriding Congressional objective of achieving the maximum possible reduction in human exposure and environmental release, section 6(h) compels EPA, subject only to constraints on feasibility, to impose requirements under section 6(a) that eliminate or stringently restrict all aspects of the manufacturing, processing, distribution in commerce and

¹ 84 Federal Register 36728 (July 29, 2019).

disposal of the five PBTs.²

EPA's proposed rule, however, retreats dramatically from this clear legislative mandate. The proposal redefines the crucial concept of "practicability" to allow the Agency to avoid restricting the five PBTs based on nebulous and subjective considerations of burden, cost, benefits and reasonableness. These considerations are not relevant under section 6(h), which directs EPA to reduce exposure to the PBTs to the extent feasible – i.e. technically and economically achievable – and provides no leeway to balance exposure reduction against a host of unrelated factors. The result of EPA's approach is a proposed rule that allows many processing, use and disposal activities involving the 5 PBTs to continue without restriction. One of the PBTs – HCBd – is not restricted at all. As a result, the proposed rule will do little to prevent buildup and accumulation of the PBTs in people and the environment. **EPA needs to fundamentally rework the proposed rule so it complies with the law and achieves the significant reductions in PBT exposure that Congress required.**

Our comments make the following key points:

- As EPA and many other authorities have long recognized, the special characteristics of PBTs dictate a comprehensive, multi-media strategy to reduce exposure and release – and thus potential accumulation in biological systems and the environment – to the lowest levels possible. This is the goal of section 6(h): it creates an expedited rulemaking process for imposing restrictions on chemicals determined to possess PBT properties with the goal of reducing exposure to the extent possible.
- Section 6(h) identifies several exacting criteria that must be satisfied to justify PBT regulation. The five PBTs subject to the proposal satisfy all these criteria. They score high for both persistence and bioaccumulation or high for one and moderate for the other based on the 2012 Work Plan methodology that Congress incorporated in the recent TSCA amendments. EPA has demonstrated a reasonable basis to conclude that the five PBTs are toxic. And it has further shown that people and the environment are likely to be exposed to the PBTs and that exposure and release are significant and widespread.
- Under section 6(h)(4), EPA must "address the risks of injury to health or the environment that [it] determines are presented by the" PBT. EPA acknowledges this

² The five PBTs subject to the proposed rule are:

- Decabromodiphenyl ethers (DecaBDE);
- Hexachlorobutadiene (HCBd);
- Pentachlorothiophenol (PCTP);
- Phenol, isopropylated, phosphate (3:1) (PIP (3:1)); and
- 2,4,6-Tris(tert-butyl) phenol (2,4,6-TTBP)

obligation in its proposal but makes no effort to explain how its proposed restrictions would discharge it. Properly interpreted, this provision requires EPA to protect against any remaining risks that the PBTs present after exposure has been reduced to the extent practicable.

- Court decisions have held that, where used in a statute, the term practicable “imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible.” The term “feasible” in turn has been interpreted to mean technically and economically achievable – i.e. doable using available or foreseeable technology and without “massive dislocation” of the affected industry. Departing from this precedent, however, EPA construes “practicability” to allow consideration of costs, benefits, reasonableness and other factors that conflict with the plain meaning and core objectives of section 6(h).
- Applying these impermissible factors, EPA’s proposal exempts several uses of the 5 PBTs from restriction under section 6(h) without showing that restricting these uses is “impracticable.” In so doing, EPA fails to apply the framework in section 6(g) of TSCA for exempting uses of a chemical from section 6(a) requirements. The section 6(g) criteria for use exemptions closely correspond to the concept of technical and economic feasibility and thus are directly relevant to determining “impracticability” under section 6(h). They also require exemptions to include time limits and other conditions necessary to protect health and the environment. EPA must go back to the drawing board and apply the requirements of section 6(g) to all the uses of the five PBTs that it seeks to exempt from its rule. We believe that many of these uses will not meet the high bar for use exemptions that section 6(g) sets and therefore should be prohibited under EPA’s rule.
- EPA has taken the position that no regulation of occupational exposure is warranted under section 6(h). However, section 6(h)(4) directs EPA “to reduce exposure” to the 5 PBTs without differentiating between pathways of exposure or exposed subpopulations. As EPA’s use and exposure assessment confirms, workers have significant exposure to the 5 PBTs (often at higher levels than the rest of the population) and these PBTs accumulate in their bodies, potentially harming them, their offspring and future generations. There is no scientific or legal basis to exempt workers – a subpopulation with significant exposure -- from a broad statutory mandate intended to prevent the buildup of PBTs in people and the environment.
- EPA also declines to impose any requirements on disposal of the 5 PBTs. Disposal is a major pathway for environmental release of PBTs and thus a significant contributor to their long-term buildup in biota and environmental media. EPA claims that regulating disposal under section 6(h) is “impracticable” in light of the waste management regime in the Resource Conservation and Recovery Act (RCRA). But it does not address how and

to what extent RCRA requirements apply to the 5 PBTs and fails to show that additional limitations on disposal are infeasible. In its final rule, EPA must examine waste management practices for all the PCBs and impose additional restrictions on disposal to the extent they are technically and economically achievable.

- Continued use of PBT-containing articles and products in commerce is also a substantial source of PBT exposure, as EPA itself finds for DecaBDE and PIP (3:1). However, EPA rejects any restrictions on articles in use based on a sweeping determination that they would be “extremely burdensome” and “unreasonable.” EPA does not substantiate this assertion or conduct any analysis of options available under section 6(a) that would be effective in reducing exposure to PBTs contained in in-use articles. EPA must carefully examine these options in its final rule and place restrictions on PBT-containing articles to the extent feasible.
- EPA’s decision not to restrict HCBd under its rule departs from the international consensus under the Stockholm Convention that it is a Persistent Organic Pollutant (POP) whose intentional and unintentional manufacture should be eliminated. Although EPA cites controls imposed under existing law to demonstrate that further restrictions on exposure are impracticable, this assertion belies its own determination that HCBd is pervasively present in environmental media and has significant human exposure. The Agency needs to reexamine the need for restrictions on this PBT, applying the high bar in section 6(h) for determining whether these restrictions are impracticable.

I. Congress Placed Stringent Restrictions on PBTs under Section 6(h) Because of Their Long-Term Build-Up in the Environment and Accumulation in Biological Systems

The serious and unique threats posed by PBTs to human health and the environment have long been recognized by EPA and other authorities.

In its 1989 PBT strategy,³ EPA noted that:

EPA has a long history of successful programs in controlling PBT pollutants -- pollutants that are toxic, persist in the environment, and bioaccumulate in food chains, and thus pose risks to human health and ecosystems. The challenges remaining on PBT pollutants stem from the fact that they transfer rather easily among air, water, and land, and span boundaries of programs, geography, and generations, making single-statute approaches less than the full solution to reducing these risks. To achieve further reductions, a multi-media approach is necessary.”

³ <https://archive.epa.gov/p2/archive/web/pdf/pbtstrat.pdf> (emphasis added)

PBTs are associated with a range of adverse human health effects, including effects on the nervous system, reproductive and developmental problems, cancer, and genetic impacts. People who eat large amounts of fish from local waters contaminated with certain PBTs are at risk for adverse effects. The developing fetus and young child are at particular risk for developmental problems. Birds and mammals at the top of the food chain are also at risk. The most famous example is the serious decline of the bald eagle in the 1960's because the fish they ate contained DDT.

In its presentation at the September 7, 2017 Webinar on section 6(h),⁴ EPA further underscored that:

“EPA believes that, as a general matter, the release to the environment of toxic chemicals that persist and bioaccumulate **is of greater concern than the release of toxic chemicals that do not persist or bioaccumulate**. Since PBT chemicals can remain in the environment for a significant amount of time and can bioaccumulate in animal tissues, even relatively small releases of such chemicals from individual facilities have the potential to accumulate over time to higher levels and cause significant adverse impacts on human health and the environment.

The proposed section 6(h) rule reiterates these concerns, emphasizing that:⁵

Toxic chemicals that persist and bioaccumulate are of concern because they remain in the environment for long periods of time and accumulate in the organisms exposed to them (*i.e.*, can build up or concentrate in body tissue) . . . Following exposure, PBT chemicals increase in concentration in the exposed organism’s tissues relative to the concentrations in environmental media to which they are exposed. Chemicals that persist and bioaccumulate have been found in humans, other aquatic and terrestrial mammals, fish, shellfish, and birds

The 1994 Stockholm Convention on Persistent Organic Pollutants,⁶ which has now been ratified by 183 countries, is a “global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have harmful impacts on human health or on the environment.”⁷ It is based on a recognition “that persistent organic pollutants possess toxic properties, resist degradation, bioaccumulate and are transported,

⁴ https://www.epa.gov/sites/production/files/2017-09/documents/pbt_public_webinar_-_9-5-17.pdf (emphasis in original).

⁵ 84 Fed. Reg. 36731.

⁶ <http://www.pops.int/TheConvention/Overview/TextoftheConvention/tabid/2232/Default.aspx>.

⁷ Although the Convention has not been ratified by the US, it represents a broad international consensus on the need to reduce the presence of PBTs in people and the environment and aligns with EPA’s long-standing approach to PBTs.

through air, water and migratory species, across international boundaries and deposited far from their place of release, where they accumulate in terrestrial and aquatic ecosystems.” Once a substance is listed as a Persistent Organic Pollutant (POP) under the Convention, the parties must “take the legal and administrative measures necessary to eliminate . . . [i]ts production and use . . . and . . . its import and export.”

The latest example of the long-term harm caused by PBTs is the class of Per- and Polyfluoroalkyl Substances (PFAS) chemicals.⁸ This large chemical category has been manufactured and used over several decades in a variety of industries in the US and around the globe. PFAS are known to be highly persistent and bio-accumulative and have been found in the blood of millions of people and in wildlife around the world. In the US, PFAS have caused widespread contamination of drinking water sources and industrial sites and pose a growing concern for impacted communities, drinking water suppliers and state and local regulators. PFAS have been linked to serious adverse health effects, including low infant birth weights, effects on the immune system, cancer and thyroid hormone disruption. They have been detected in food and are present in many household products to which millions of consumers are exposed. The serious and widespread harm that PFAS have caused could have been avoided if, years ago, regulators had recognized their PBT properties and imposed stringent restrictions on their manufacture, use and disposal.

As EPA and many other authorities have long recognized, the special characteristics of PBTs dictate a comprehensive, multi-media strategy to reduce exposure and release – and thus potential accumulation in biological systems and the environment – to the lowest levels possible. This is the goal of section 6(h). It creates an expedited rulemaking process for imposing restrictions on chemicals determined by EPA to possess PBT properties using stringent criteria. Reflecting a sense of urgency, rules imposing these restrictions must be proposed no later than June of 2019 and finalized 18 months thereafter. Section 6(h)(2) is explicit that, in contrast to other chemicals, EPA is not “required to conduct risk evaluations” on PBTs subject to section 6(h). This demonstrates that Congress presumed PBTs to be harmful and believed a risk determination is unnecessary to justify eliminating their presence in commerce and the environment. Section 6(h) is explicit about this objective: it calls for EPA “to reduce exposure to [a PBT] substance to the extent practicable.”

II. The Five Substances Subject to EPA’s Proposal Meet the TSCA Criteria for Regulation under Section 6(h)

Section 6(h) identifies several exacting criteria that must be satisfied to justify PBT regulation. The five PBTs subject to the proposal satisfy all these criteria, demonstrating their potential for long-term buildup and accumulation and harmful impacts on people and the environment.

⁸ https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf

A. The Five PBTs Score High for Both Persistence and Bioaccumulation or High for One and Moderate for the Other

Section 6(h)(1) provides that its requirements apply to chemicals that (1) are identified in the 2014 update of the TSCA Work Plan for Chemical Assessments and scored high for both persistence and bioaccumulation, or high for one and either high or moderate for another, based on EPA's 2012 Work Plan methodology, (2) do not fall within statutory exclusions for metals and certain previous regulatory actions, and (3) were not the subject of timely industry requests for risk evaluations as described in section 6(h)(5). As EPA has explained in the preamble to its proposed rule,⁹ the five chemicals targeted for restriction under section 6(h) all scored high or moderate for persistence and bioaccumulation properties using the 2012 Workplan methodology.¹⁰ Moreover, none of the five chemicals is a metal and EPA has excluded two PBTs for which industry has requested that the Agency conduct TSCA risk evaluations.¹¹

B. There is a Reasonable Basis to Conclude that the Five PBTs Are Toxic

Under section 6(h)(1)(A), EPA must also have a "reasonable basis to conclude" that a chemical meeting the criteria for persistence and bioaccumulation is "toxic." To meet this requirement, EPA must identify data or some other basis to conclude that the chemical can cause one or more acute or chronic adverse effects in people or animal species. The severity of these effects, the exposure levels at which they occur, and their underlying biological mechanism are irrelevant because these considerations relate to "risk" rather than "toxicity." Using the criteria and methodology in its 2012 Work Plan Methods Document, EPA screened the five PBTs subject to its proposal for "hazard" based on human health and environmental toxicity concerns. All five received "high" or "moderate" hazard scores. As EPA describes in its proposal,¹² these scores are sufficient in themselves to provide a "reasonable basis to conclude" that the five PBTs are "toxic." Moreover, for use in this rulemaking, EPA developed a peer-reviewed document entitled "Environmental and Human Health Hazards for Five Persistent,

⁹ 84 Fed. Reg. 36734.

¹⁰ Describing provisions that form the basis for section 6(h), the House Report on the TSCA legislation states that "[t]he Committee hopes the Administrator will rely on its TSCA Work Plan Chemicals Methods Document published in February 2012 in identifying PBT candidate substances for listing." H.R Report 114-176, 114 Cong, 1st Sess, June 23, 2015, at 27.

¹¹ 84 Fed. Reg. 36734. Unfortunately, however, EPA has taken no follow-up action on these chemicals so they are now in a limbo where they are neither being regulated as PBTs or undergoing TSCA risk evaluations. EPA has not initiated risk evaluations for the two PBTs, as it promised in 2016. Nor has EPA published the risk evaluation requests for public review and comment, as required by 40 CFR § 702.37(e)(4), or required the requesting company to submit the necessary information to process the request under § 702.43(b)(4). If EPA does not take immediate action to meet these requirements, it will lack any basis to exclude the two PBTs from restriction under section 6(h) and will need to address them in its rulemaking.

¹² 84 Fed. Reg. 36734

Bioaccumulative, and Toxic Chemicals” (Hazard Summary) that provides additional support for the Work Plan hazard scores.¹³

No evidence in the record contradicts EPA’s determination that the five chemicals qualify as PBTs under section 6(h). As the Agency concludes, “information EPA has collected and reviewed in developing this proposal provides no basis to call into question the scoring for persistence, bioaccumulation, and toxicity performed in 2014 for these five PBT chemicals pursuant to the screening process described in the TSCA Work Plan Chemicals: Methods Document.”¹⁴

C. People or the Environment Are Likely to be Exposed to the Five PBTs

Finally, under section 6(h)(1)(B), EPA must determine that exposure to the chemical under the conditions of use is “likely” to the general population, a potentially exposed or susceptible population or the environment. This determination must be made on the basis of a “use and exposure assessment.” Again, however, the analysis EPA conducts need not be extensive or comprehensive. Since EPA must only show that the occurrence of exposure is “likely”, it is not required to characterize the nature, magnitude and duration of exposure or even to document actual exposure.

Under the Work Plan Methods Document, the five PBTs have already been screened and scored for “exposure”:¹⁵ this should constitute adequate evidence of potential exposure under section 6(h)(1)(B). Moreover, in compliance with the statute, EPA has supplemented this screening process with an Exposure and Use Assessment on the five PBTs which summarizes available information on their manufacturing (including importing), processing, distribution in commerce, use, and disposal. The Assessment documents numerous significant pathways of human exposure and environmental release and shows that both the general population and numerous vulnerable subpopulations are exposed to the 5 PBTs, often at high levels. Thus, EPA has satisfied this final criterion for PBT regulation under section 6(h).

III. The Proposed Restrictions on the Five PBTs Violate TSCA Because They do not Address All Risks of Injury and Fail to Achieve the Greatest Feasible Reduction in Exposure and Release

Restrictions on PBTs identified in accordance with section 6(h)(1) must comply with section 6(h)(4). Under this provision, in determining which of the requirements listed in section 6(a) to impose, EPA must apply two factors. First, EPA must “address the risks of injury to health or the environment that [it] determines are presented by the” PBT. Second, EPA must impose

¹³ 84 Fed. Reg. 36743-4.

¹⁴ 84 Fed. Reg. 36734

¹⁵ Id.

requirements that “reduce exposure to [the PBT] to the extent practicable.”¹⁶ EPA has met neither of these requirements.

A. EPA has not Addressed Risks of Injury to Health and the Environment Remaining After Requiring All Practicable Reductions in Exposure to the PBTs

The preamble to the proposal acknowledges EPA’s obligation to impose restrictions which “address the risks of injury” presented by the five PBTs but then simply cites its Use and Exposure Assessment and Hazard Summary as discharging this obligation.¹⁷ However, these documents merely provide background information on the use, exposure and toxicity profiles of the five PBTs. They do not address their risks of injury to health and the environment.

In cases where EPA’s rule bans or phases out uses of the PBTs, these requirements should be sufficient to “address the risks” that the PBT uses present. Given those chemicals’ acknowledged persistence, toxicity, and exposure, elimination of these uses is the most effective means of eliminating the risks they pose. EPA has not, however, addressed the risks posed by the uses of the PBTs that it is not restricting in the proposed rule based on a finding that such restrictions would be “impracticable.” As discussed below, EPA’s definition of practicability is flawed; in fact, it is practicable to reduce far more PBT exposures than EPA has proposed. However, to the extent there are any exposures that EPA cannot feasibly reduce, EPA must still “address the risks” associated with those exposures. Pursuant to section 6(h)(3), EPA is not required to conduct a risk evaluation to address these risks. Instead, consistent with the purposes of section 6(h) and the well-established harms associated with PBTs, EPA should presume that any exposure to PBTs presents risk. Therefore, in the event that such exposures cannot be fully eliminated, EPA must “select[] among . . . other restrictions” listed in section 6(a) to address the PBTs’ remaining risks. By excluding PBT uses from regulation based solely on the alleged impracticability of exposure reductions, without “address[ing] the risks” that remain, EPA has not complied with TSCA section 6(h)(4).

B. EPA’s Interpretation of Section 6(h) Violates the Unambiguous TSCA Requirement to Reduce Exposure to the Extent Practicable

1. Definition of Practicability

By requiring EPA to “reduce exposure to [the PBTs] to the extent practicable” Congress sought to assure that the restrictions imposed under section 6(h) result in the largest possible reductions in exposure by humans and biota that are achievable in practice. The statute directs EPA to achieve this goal using the range of restrictions listed in section 6(a). These restrictions

¹⁶ While earlier drafts of the legislation used the phrase “to the maximum extent practicable,” the legislative history indicates that this phrase was considered synonymous with the phrase “to the extent practicable” included in the enacted legislation and thus the deletion of “maximum” did not change EPA’s obligations. Congressional Record – Senate 3517 (June 7, 2016).

¹⁷ 84 Fed. Reg. at 36733.

cover the entire life-cycle of the chemical and enable EPA to regulate all pathways of exposure. The section 6(a) requirements most effective in reducing human exposure and environmental release are a prohibition on manufacturing, processing and distribution in commerce (§6(a)(1)), a prohibition on any manner or method of commercial use (§6(a)(5)), and a prohibition or restriction on any manner or method of disposal (§6(a)(6)(B)). These prohibitions should be default requirements under section 6(h). If EPA selects less stringent requirements, it should justify them on the basis of “practicability.”

According to the Merriam-Webster dictionary, the term “practicable” means “capable of being put into practice or of being done or accomplished.” The dictionary lists as synonyms achievable, attainable, doable, feasible, possible, realizable, viable, and workable. Court decisions have held that, where used in a statute, the term practicable “imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible.” *Defenders of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 131 (D.D.C. 2001). *Fund for Animals v. Babbitt*, 903 F. Supp. 96, 105 (D.D.C.1995) (“Obviously, the phrase ‘to the maximum extent practicable’ does not permit an agency unbridled discretion. It imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible.”)

Since “practicable” is synonymous with “feasible,” court cases construing this term in other laws shed light on how EPA should interpret its obligations under section 6(h). In *American Textile Manufacturers Institute, Inc. v. Donovan (Cotton Dust)*, 452 U.S. 490 (1981), the Supreme Court held that “feasible” in section 6(b)(5) of the Occupational Safety and Health Act (OSH Act) means “capable of being done.” *Id.* at 509. Therefore, the Court determined, the OSH Act did not mandate cost-benefit analysis because “Congress itself defined the basic relationship between costs and benefits, by placing the ‘benefit’ of worker health above all other considerations save those making attainment of this ‘benefit’ unachievable.” *See also Friends of Boundary Waters Wilderness v. Thomas*, 53 F.3d 881, 885 (8th Cir. 1995) (“feasible” means “physically possible”).

Lower courts have divided feasibility into two components: technological feasibility and economic feasibility. This divide was first articulated in *American Iron & Steel Institute v. OSHA*, 577 F.2d 825, 832 (3d Cir. 1978) and elaborated on in *United Steelworkers v. Marshall*, 647 F.2d 1189, 1264 (D.C. Cir. 1980). According to these decisions, the technology to meet a standard must be “either already in use or has been conceived and is reasonably capable of experimental refinement and distribution within the standard’s deadlines.” The decisions also hold that cost alone is not the measure of a standard’s economic feasibility. Rather, a standard will be deemed economically feasible “if it does not threaten ‘massive dislocation’ to, or imperil the existence of the industry.” *Id.* at 1265.

In accordance with these decisions, EPA should apply a two-fold test in determining “practicability” under section 6(h). First, is the elimination of exposure to a PBT technically achievable? And second, is it within the economic capability of the industry – i.e. able to be achieved without causing massive dislocation or threatening the industry’s viability?

2. EPA's Distortion of the Statutory Requirements

EPA's proposed rule does not apply this two-fold test but uses a broad and open-ended definition of practicability that departs from the wording and intent of section 6(h).

First, "EPA interprets [the practicability] requirement as directing the Agency to consider such factors as achievability, feasibility, workability and reasonableness."¹⁸ While "achievability" and "feasibility" can be equated with "practicability", "reasonableness" cannot. To use this term as the basis for restricting exposure to PBTs would allow EPA to reject requirements that are technically and economically achievable merely because, in the Agency's subjective judgment, they are not "reasonable." Thus, EPA could ignore section 6(h)'s overriding goal of eliminating PBTs from commerce and the environment wherever feasible by determining that the costs of restricting PBTs are excessive or do not justify the benefits.

Second, EPA construes section 6(c) of TSCA to allow consideration of costs, benefits and other economic factors under section 6(h) even though they are in direct conflict with its core objectives:

EPA's approach to determining whether particular prohibitions or restrictions are practicable is informed in part by a consideration of certain other provisions in TSCA section 6. For example, TSCA section 6(c)(2)(A) provides a list of factors that EPA must consider in promulgating a rule under TSCA section 6(a), and EPA's statement on those factors can be found in Unit II.B. Those factors include the costs and benefits of the rule, along with the effects on health and the environment, the magnitude of human and environmental exposure, the benefits of the chemical substance for various uses, and other factors, such as the effect of the rule on the national economy, small business, and technological innovation.¹⁹

EPA asserts that it can base requirements under section 6(h) on any of these considerations because TSCA section 6(c)(2)(B) directs EPA to "factor [them] in" when developing a rule under section 6(a) "to the extent practicable."²⁰

¹⁸ 84 Fed. Reg. 36733

¹⁹ *Id.*

²⁰ Even in the context of non-PBTs addressed under section 6(b) risk evaluations, EPA lacks discretion to adopt requirements under section 6(a) that fail to eliminate unreasonable risks because the Agency deems the costs excessive or believes they are outweighed by the benefits of the chemical. Section 6(a) is explicit that, where it has determined that a substance presents an unreasonable risk of injury, EPA must select those requirements that are "necessary so that the chemical substance no longer presents such [unreasonable] risk." Section 6(c)(2)(B) states that EPA's consideration of the factors listed in section 6(c)(2)(A) must be "in accordance with subsection (a)." As explained by the Senate Democratic conferees:

As revised, subsection (a) . . . instructs that EPA's rule must ensure that the chemical substance or mixture "no longer presents" the unreasonable risk identified in the risk evaluation. Thus, it is clear that the considerations in the statement required under subparagraph (c)(2)(A) do not require EPA to

Contrary to EPA, there is no indication in TSCA that Congress intended the framework for analysis in section 6(c) to govern PBT requirements under section 6(h). Moreover, as EPA recognizes, other provisions of TSCA section 6 should be applied only when they are “consistent with the direction in TSCA section 6(h)”, not when they “conflict with TSCA section 6(h).”²¹ In keeping with the long-standing goal of preventing the buildup of PBTs in humans, biota and the environment, section 6(h) seeks to reduce PBT exposure and release “to the extent practicable.” This requirement is conditioned only on economic and technical feasibility; it provides no room to balance PBT restrictions against costs, benefits, other economic impacts and the magnitude of human and environmental exposure. Thus, to analyze these factors under section 6(c) and then use them to limit restrictions on PBTs would “conflict” with the goals and express wording of section 6(h) and effectively nullify its unique approach to restricting PBTs.²² EPA must therefore recognize that section 6(c) is inapplicable to PBT regulation under section 6(h) and decline to consider the factors it prescribes in its final rule.

IV. EPA Cannot Exempt Uses of the five PBTs from Section 6(g) Restrictions Except in Accordance with the Exemption Criteria and Other Requirements in Section 6(g)

EPA’s proposal would effectively exempt several uses of the 5 PBTs from restriction under section 6(h) on a wide variety of grounds. For example, to justify not prohibiting the recycling of plastics containing DecaBDE, thereby allowing its reintroduction in the stream of commerce, EPA asserts that it “does not believe it is reasonable . . . to impose a large burden on society through the further reduction or elimination of low concentrations of DecaBDE in articles made from recycled materials.”²³ Similarly, EPA proposes not to regulate PIP (3:1) or PIP (3:1)-containing products for use in new or replacement parts for the automotive industry because this “could increase costs and safety concerns without meaningful exposure reductions.”²⁴ EPA

demonstrate benefits outweigh costs, to definitively determine or select the least-cost alternative, or to select an option that is demonstrably cost-effective or is the least burdensome adequately protective option. Rather, **it requires only that EPA take into account the specified considerations in deciding among restrictions to impose, which must be sufficient to ensure that the subject chemical substance no longer presents the unreasonable risk EPA has identified.**

Congressional Record – Senate 3517 (June 7, 2016) (emphasis added). Just as EPA cannot use the section 6(c) factors to justify failing to eliminate an unreasonable risk determined in a section 6(b) risk evaluation, so it cannot use these factors to justify failing to reduce exposure to the extent practicable as required by section 6(h).

²¹ 84 Fed. Reg. 36733

²² If the 6(c) factors were used to determine the appropriate level of regulation for PBT chemicals, section 6(h)(4) be “mere surplusage.” *Dunn v. Commodity Futures Trading Comm’n*, 519 U.S. 465, 472 (1997). Moreover, where two different statutory provisions are potentially applicable to an agency’s action, “the specific trumps the general.” *United States v. Wenner*, 351 F.3d 969, 975 (9th Cir. 2003) (explaining that “[s]pecific terms prevail over the general in the same or another statute which otherwise might be controlling”)

²³ 84 Fed. Reg. 36748.

²⁴ 84 Fed. Reg. 36749

likewise rejects prohibiting 2,4,6-TTBP in fuel additives and fuel injector cleaners for consumer/retail use on the ground that it “would potentially impact more retail sellers and users, be more difficult to enforce, and impose a greater compliance burden on the regulated community.”²⁵ Elsewhere, EPA decides against restricting uses of the 5 PBTs because these restrictions would be “overly burdensome” or “costly”, “there is no guarantee that a technically equivalent alternative will be developed”²⁶ or “the burden of creating and testing new formulations . . . is high.”²⁷ In these and many other cases, EPA foregoes opportunities to reduce exposure and release even as it elsewhere concludes that “viable substitutes are available” for most or all of the uses of the five PBTs.²⁸

While EPA invokes “impracticability” to justify not restricting uses of the PBTs, it misapplies this term. The factors EPA cites -- inconvenience, cost, burden, enforcement difficulty and compliance complexity -- do not in fact demonstrate that elimination of the PBT use is “impracticable.” Rather, as shown above, this standard requires EPA to show that prohibiting the use is technically impossible or economically unachievable – a determination that EPA fails to make for any of the PBT uses that it exempts from regulation. Nor can EPA justify use exemptions on the ground that it believes a particular use results in insubstantial exposure since it may be practicable (and thus required) to eliminate even low exposures of PBTs. Moreover, since section 6(h) expressly precludes risk evaluations, EPA has no basis under the law to make a judgment that a pathway of exposure is too insignificant to require restriction. This is in keeping with the recognition that any presence of a PBT in humans and the environment can result in buildup and accumulation over time and should be prevented unless it is economically or technically infeasible to do so. For EPA to reject regulating a source of exposure because it is “small” is contrary to the premise on which section 6(h) is based and to scientific understanding of how PBTs cause harm.

Section 6(g) of TSCA provides a framework for exempting uses of a chemical from section 6(a) requirements. EPA has chosen not to apply this framework in its section 6(h) rulemaking although it does seek comment on its applicability.²⁹ In fact, the section 6(g) criteria for use exemptions closely correspond to the concept of technical and economic feasibility and thus are directly relevant to determining “impracticability” under section 6(h). Unlike section 6(c), section 6(g) does not conflict with the language and goals of section 6(h) but complements

²⁵ 84 Fed. Reg. 36752

²⁶ 84 Fed. Reg. 36751

²⁷ 84 Fed. Reg. 36750

²⁸ For example, “EPA believes that there are viable substitutes for all uses of DecaBDE” (84 Fed. Reg. 36748) and that “there are readily available substitutes for the retail fuel additives, as well as oil and lubricants, containing 2,4,6-TTBP” (id at 36752).

²⁹ For example, EPA proposes not to restrict automotive and aerospace replacement parts containing DecaBDE on grounds of “impracticability” but “also requests comment on whether, instead of a determination that it is not practicable to regulate these parts, EPA should consider an exemption under TSCA section 6(g) for them.” 84 Fed Reg. 36747

them and thus should govern EPA's decisions to exempt uses from exposure reduction requirements.

Section 6(g)(1) provides that:

The Administrator may, as part of a rule promulgated under subsection (a), or in a separate rule, grant an exemption from a requirement of a subsection (a) rule for a specific condition of use of a chemical substance or mixture, if the Administrator finds that—

(A) the specific condition of use is a critical or essential use for which no technically and economically feasible safer alternative is available, taking into consideration hazard and exposure;

(B) compliance with the requirement, as applied with respect to the specific condition of use, would significantly disrupt the national economy, national security, or critical infrastructure; or

(C) the specific condition of use of the chemical substance or mixture, as compared to reasonably available alternatives, provides a substantial benefit to health, the environment, or public safety.

Section 6(g)(2) requires that, when proposing an exemption, EPA “shall analyze the need for the exemption and shall make public the analysis and a statement describing how the analysis was taken into account.” However, the rulemaking record lacks such an analysis and thus fails justify EPA's exemptions under the criteria in section 6(g). For example, there is no demonstration that the exempted uses are “critical and essential” and lack a “technically and economically feasible safer alternative”; that their elimination would “significantly disrupt the national economy, national security, or critical infrastructure”; or that compared to alternatives, they provide “a substantial benefit to health, the environment, or public safety.” In fact, it is doubtful that several of the exemptions in the proposed rule could be shown to meet these criteria.

Section 6(h) also requires important conditions on exemptions that EPA's proposed rule fails to impose. For example, section 6(g)(3) directs EPA to establish “a time limit on any exemption . . . on a case-by-case basis.” This time limit assures that the exemption is in effect no longer than necessary and that industry has maximum incentives to develop alternatives to the regulated chemical so it can be phased out of the use as soon as possible. However, EPA's proposed rule does not place time limits on any exemptions. For PIP(1:3), EPA seeks comment on a time limit of 20 years for its proposed exemptions but this lengthy phase out period is not justified and is far longer than necessary.³⁰ Similarly, section 6(g)(4) directs EPA to condition exemptions on

³⁰ EPA proposes to prohibit processing and distribution in commerce of PIP (3:1) and products containing the chemical, but proposes multiple exemptions to the prohibition: aviation hydraulic fluid; lubricants and greases; and

recordkeeping, monitoring, reporting and other requirements “necessary to protect health and the environment while achieving the purposes of the exemption.” For PBTs, such conditions can minimize exposure and release and therefore reduce buildup and accumulation in people and biota even if a specific use is exempted from restriction. The EPA proposal includes recordkeeping requirements but lacks other conditions (such as monitoring of emissions, limits on water discharges or periodic reporting on efforts to find alternatives to the exempted use) that would restrict exposure and release and enable EPA to track progress in transitioning to substitute chemicals.

EPA must go back to the drawing board and apply the requirements of section 6(g) to all the uses of the five PBTs that it seeks to exempt from restriction under its rule. For each such use, EPA should prepare an analysis under section 6(g)(2) evaluating whether the use meets the exemption criteria in section 6(b)(1). We expect that EPA will determine that several of the current exemptions do not meet these stringent standards and should be removed from the final rule. Any use that cannot be justified under the section 6(g) criteria should be prohibited under the rule. For those exemptions that EPA can justify, EPA must comply with section 6(g) by imposing a meaningful time limit and other conditions necessary to protect health and the environment and assure progress in phasing out the exempt use.

V. EPA Lacks any Basis to Conclude that Worker Exposure Is Exempt from Section 6(h) and that No Restrictions on Worker Exposure are Needed

As EPA states in its proposal, its rule would not “directly regulate occupational exposure through mandated controls such as engineering controls or use of personal protective equipment such as gloves or respirators.”³¹ On its face, this exclusion is unwarranted. Section 6(h)(4) directs EPA “to reduce exposure” to the 5 PBTs. It draws no distinctions between pathways of exposure or exposed subpopulations. Nor are such distinctions compatible with the purposes of section 6(h). Workers have significant exposure to PBTs (often at higher levels than the rest of the population) and PBTs accumulate in their bodies, potentially harming them, their offspring and future generations. There is no scientific or legal basis to exempt workers – a subpopulation with significant exposure -- from a broad statutory mandate intended to prevent the buildup of PBTs in people and the environment.

EPA justifies its approach on the ground that it “expects there is compliance with federal and state laws, such as worker protection standards . . . [and] therefore existing OSHA regulations for worker protection and hazard communication will prevent occupational exposures that are causing injury from occurring.”³² However, as EPA recognizes, none of the 5 PBTs is subject to OSHA occupational health standards and thus there are no enforceable exposure limits for

new and replacement parts for vehicles. As proposed, there would be no time limit on these exemptions. 84 Fed. Reg. 36750.

³¹ 84 Fed. Reg. 36745

³² Id

workplaces where the PBTs are used. EPA also claims that “information from discussions with industry” shows “that engineering controls or PPE is routinely used in workplaces where the PBT chemicals are being manufactured, processed, or used.” But the preamble to the proposed rule only cites communications from two commenters to substantiate this claim for 2,4,6-TTBP and acknowledges that “EPA does not have the same detailed information . . . for the other 4 PBT chemicals.”³³ Likewise, EPA cites no workplace monitoring data for the 5 PBTs or provides examples of Safety Data Sheets (SDSs) calling for reliance on respirators or other control measures to protect workers.

As for the claimed obligation of employers to consider all relevant data and control exposure accordingly, OSHA regulations give employers wide latitude to interpret evidence of workplace risks and to select worker protection measures they deem appropriate.³⁴ The same is true under OSHA’s respiratory protection standard, which allows employers to determine when respirator use is necessary to protect workers absent a regulatory requirement mandating exposure limits and permitting PPE as a compliance option.³⁵ It is implausible that employers will conduct their own analysis of hazard data and establish and enforce exposure limits and PPE requirements that OSHA itself has not adopted. As EPA itself recognized in its draft risk evaluation for 1,4-dioxane,³⁶ “it cannot be assumed that employers have or will implement comprehensive respiratory protection programs for their employees” (p. 53). Similarly, this draft evaluation acknowledges that “[d]ata about the frequency of effective glove use – that is, the proper use of effective gloves – is very limited in industrial settings” (p. 293).

In fact, EPA’s exposure and use assessment indicates that potential worker exposure to the PBTs is significant. As EPA finds for DecaBDE:³⁷

Occupational exposures from inhalation and dermal exposure to dust may occur during transfer and packaging operations and from fugitive dust emissions from process operations if workers are unprotected. Dermal exposure to liquids is possible from incidental contact of liquid flame- retardant formulations containing DecaBDE during transfer, loading, and mixing operations. Occupational exposures may occur when the bags of flame retardant are emptied into a hopper prior to mixing if workers are unprotected. . . If workers are unprotected, inhalation exposures may occur due to: Fugitive dust generated from unloading and transfer of the solid flame retardant into mixing vessels; mist generated from the squeezing of the immersed fabric with rollers; from the roll coating application during back coating; and, after the coating operations are complete, during fabric cutting. If workers are unprotected, dermal exposures to

³³ 84 Fed. Reg. 36746

³⁴ OSHA’s PPE standard requires employers to assess the hazards workers face but to provide PPE only when the employer deems such measures “necessary.” 29 C.F.R. § 1910.132(a).

³⁵ *Id.* § 1910.134(a)(2).

³⁶ https://www.epa.gov/sites/production/files/2019-06/documents/1_14-dioxane_draft_risk_evaluation_06-27-2019.pdf

³⁷ 84 Fed. Reg. 36741

solid and liquid DecaBDE mixtures in fabric finishing may occur from unloading operations, mixing finishing baths, equipment cleaning, and spilling.

The likelihood of substantial worker exposure during these many operations is high yet EPA provides no evidence that exposure is not occurring

In previous rulemakings under TSCA section 6, EPA has found that respirators and other protective gear are used intermittently by workers even where they are legally required, that Safety Data Sheets (SDS) and directions for safe use are often misunderstood or ignored, and that employers often fail to provide adequate training and equipment to their workers.³⁸ For these reasons, if a chemical presents a significant risk, OSHA and NIOSH manage that risk using the “hierarchy of controls,” under which hazard elimination, substitution, engineering and administrative controls are all prioritized over the use of PPE.³⁹ Indeed, EPA’s proposed section 6(h) rule itself recognizes that “[e]limination of the hazardous chemical from the workplace. . . is the most preferred and most effective control measure identified in the recommended hierarchy of controls to protect workers from workplace hazards.”⁴⁰ Yet the proposal makes no effort to require the elimination of worker exposure to the five PBTs or explain why it is “impracticable.”

In short, section 6(h) requires EPA to reduce worker exposure to the PBTs to the lowest level that is technically and economically achievable.⁴¹ The proposed rule provides no evidence that the workplace controls now in place meet this standard. EPA must include workplace protection requirements in its final rule that reduce worker exposure to the extent feasible. Consistent with the hierarchy of controls, it should examine whether this standard can be met by eliminating uses of the PBTs that result in worker exposure through substitution of non-PBT alternatives. If this is not practicable, EPA should require engineering controls that achieve the maximum reduction in workplace exposure possible.

VI. The Proposed Rule Fails to Reduce Disposal and Environmental Release of the PBTs to the Extent Practicable

In the proposed rule, EPA declines to impose any requirements on disposal of the 5 PBTs.⁴² This sweeping exclusion from regulation under section 6(h) is contrary to TSCA. Disposal is a major pathway for environmental release of PBTs and thus a significant contributor to their long-term buildup in biota and environmental media. Moreover, EPA’s broad obligation under section 6(h)(4) to “reduce exposure . . .to the extent practicable” plainly encompasses environmental

³⁸ Methylene Chloride and N-Methylpyrrolidone; Regulation of Certain Uses Under TSCA Section 6(a), 82 Fed. Reg. 7464, 7481 (Jan. 19, 2017).

³⁹ OSH, Ctrs. for Disease Control & Prevention, updated Jan. 13, 2015, <https://www.cdc.gov/niosh/topics/hierarchy/>.

⁴⁰ 84 Fed. Reg. 36745

⁴¹ Because section 6(h) is not risk-based and does not require a risk evaluation, the goal of exposure reduction should not be to protect workers from immediate hazards but to prevent the accumulation of the PBT in their bodies and its resultant buildup in future generations and the environment.

⁴² 84 Fed. Reg. 36744-45.

as well as human pathways of exposure. Section 6(h) directs EPA to select requirements to reduce exposure from the list of prohibitions and other restrictions in section 6(a), and this list includes a “requirement prohibiting or otherwise regulating any manner or method of disposal.” To categorically exclude disposal from EPA’s section 6(h) is thus unsupported.

The preamble to the proposed rule describes at length the waste management scheme in the Resource Conservation and Recovery Act (RCRA) and then states that, “[i]n view of this comprehensive, stringent program for addressing disposal, EPA is proposing to determine that it is not practicable to impose additional requirements under TSCA on the disposal of these PBT chemicals.”⁴³ This determination assumes that in all cases RCRA controls on waste disposal are the most stringent technically and economically feasible. However, RCRA does not embody a “one size fits all” approach to waste disposal. Some wastes are tightly managed as “hazardous” under the cradle-to-grave system in Subtitle C. But the universe of wastes deemed “hazardous” is only a small portion of all wastes subject to RCRA. Non-hazardous waste is governed by the less restrictive provisions of Subtitle D, which generally establish minimum standards for landfills but defer to states for implementation and enforcement. Individual non-hazardous wastes are rarely subject to specific management requirements under Subtitle D and there is no basis for assuming that disposal of these wastes by generators, transporters and landfill operators under the Subtitle is controlled to the greatest extent feasible.

EPA has not analyzed the status of the 5 PBTs under RCRA in any detail. It notes that HCB is “a hazardous constituent under 40 CFR part 261 . . . , which identifies solid wastes which are subject to regulation as hazardous wastes” but does not address whether the other 4 PBTs are managed as hazardous waste as well.

EPA’s use and exposure assessment for these chemicals demonstrates that generation and disposal of wastes and related environmental releases are significant under current conditions of use. As EPA finds for DecaBDE:⁴⁴

Releases to land may occur during disposal of transfer containers containing residual material, collection and disposal of floor sweepings, and disposal of off-spec product. Equipment and general area cleaning with aqueous cleaning materials results in releases to water . . . Releases from recycling facilities may occur from discarded material that cannot be recycled and reclaimed and is disposed in landfills . . . The end-of-life disposal and waste handling options for products containing DecaBDE include disposal in landfills, recycling and incineration.

Reflecting the impact of environmental releases of DecaBDE from waste disposal and other activities, EPA concludes that “[n]umerous monitoring studies have shown that DecaBDE has been detected in a wide variety of media such as indoor dust, air, soil, human blood, and fish.”⁴⁵ The assessment of DecaBDE for listing under the Stockholm Convention also

⁴³ Id.

⁴⁴ 84 Fed. Reg. 36741

⁴⁵ 84 Fed. Reg. 36742

emphasizes that “[e]missions of c-decaBDE to the environment occur at all its life cycle stages but are assumed to be highest during service life and in the waste phase. . . efficient control measures for the handling of waste containing c-decaBDE will also be essential. Due to the historical- and present use of c-decaBDE as a flame retardant, a large number of products in use will become waste in the future.”⁴⁶

Given its widespread presence in numerous receptors, it is inconceivable that wastes containing DecaBDE are being managed as stringently as practicable and further disposal restrictions under TSCA section 6(h) would not be feasible. Thus, in its final rule, EPA needs to fully identify and analyze current waste disposal practices and requirements and impose all further restrictions on waste disposal that will reduce exposure and are practicable.

VII. There Is No Basis for Excluding In-Use Articles Containing a PBT from Regulation under Section 6(h)

EPA’s proposal indicates that it is “not generally proposing to use its TSCA section 6(a) authorities to regulate commercial use of products containing the PBT chemicals.”⁴⁷ Here too, EPA seeks to impose a blanket exclusion from regulation under section 6(h) that has no basis in TSCA.

TSCA gives EPA broad regulatory authority over “articles” in commerce. The directive in section 6(h)(4) to “reduce exposure . . . to the extent practicable” plainly encompasses articles and products which are a source of PBT exposure. TSCA provides tools to address such articles and products. The restrictions authorized by section 6(a) include a “requirement prohibiting or otherwise regulating any manner or method of commercial use” (§ 6(a)(5)) and broad public notice, replacement and repurchase requirements for substances and mixtures in commerce (§ 6(a)(7)). EPA can apply these requirements to PBTs under section 6(h)(4).

Continued use of PBT-containing articles and products in commerce is a substantial source of PBT exposure, as EPA’s proposal demonstrates for DecaBDE:⁴⁸

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 occur via breastmilk ingestion and mouthing of hard plastic toys and fabrics . . . Experimental product testing studies suggest that DecaBDE can be emitted from articles during use through abrasion and direct transfer to dust on surfaces. Based

⁴⁶ UNEP (2015) Report of the Persistent Organic Pollutants Review Committee on the work of its eleventh meeting: Risk management evaluation on decabromodiphenyl ether (commercial mixture, c-decaBDE). Pg 4. Available: <http://chm.pops.int/TheConvention/POPsReviewCommittee/Meetings/POPRC11/POPRC11Documents/tabid/4573/>

⁴⁷ 84 Fed. Reg. 36745

⁴⁸ 84 Fed. Reg. 36741-2

on DecaBDE's physical chemical properties, ingestion of settled dust through routine hand-to-mouth and object-to-mouth contact is likely the primary exposure route for articles. The inhalation pathway also contributes to exposure when suspended particles deposited in the upper air are subsequently swallowed.

As noted in the review supporting listing DecaBDE as a POP: "The average service life for electric and electronic equipment is about 10 years hence c-decaBDE will continue to be released to the environment through articles in use for years to come."⁴⁹

Although less thoroughly studied, PIP(1:3) present in articles is likewise a significant source of environmental release and consumer exposure according to EPA:⁵⁰

PIP (3:1) is an additive flame retardant that is used in a variety of articles including plastic resins, foam, and synthetic rubber. . . . Additive flame retardants are not chemically bound and are relatively unattached to the polymer matrix. Therefore, they have the increased potential of migrating from products to the surrounding environment during normal use. . . In the literature search, information was identified showing that TPP or its metabolites were detected or estimated in human blood, dermal wipes, fish, terrestrial invertebrates, birds, and terrestrial mammals.

Despite their significant contribution to buildup and accumulation in people and the environment, however, EPA "is not proposing to prohibit the commercial use of articles or products containing DecaBDE or PIP (3:1)" because "[s]uch a prohibition would not be practicable; to the contrary, it would be extremely burdensome."⁵¹

EPA's categorical rejection of regulating articles and products is not accompanied by any economic analysis of the impacts of such regulation or any evaluation of specific options for reducing exposure to PBTs in such articles and products. For example, rebate programs that offer incentives for replacing existing products with new models have been used successfully in the home appliance sector and other industries. Companies and local governments have also created recycling incentive programs to encourage consumers to properly dispose of batteries, smartphones and other products. Public notice programs could advise consumers how to use PBT-containing articles in a way that minimizes exposure and release. All these remedies are authorized under section 6(a) but have not been considered by EPA. In developing its final rule, EPA must examine how best to use its TSCA authorities to reduce exposure from articles and products to the extent practicable under section 6(h).

VIII. EPA's Failure to Impose Any Restrictions on HCBd, Which Has Been Listed as a POP Under the Stockholm Convention, Is Unjustified

Hexachlorobutadiene (HCBd), a POP designated for elimination of manufacture and use under the Stockholm Convention, is widely distributed in the environment. According to

⁴⁹ UNEP Report, supra note 46.

⁵⁰ 84 Fed. Reg. 36742

⁵¹ 84 Fed. Reg. 36745

EPA, “multiple studies show that HCBd has been detected in a wide variety of media,” including high concentrations in ambient air, surface water, soil, and sediment, and lower concentrations in drinking water, indoor air, and sludge/biosolids.⁵² The review supporting listing of HCBd as a POP found that its presence in the environment “is likely, as a result of its long range environmental transport, to lead to significant adverse human health and environmental effects.”⁵³ It further concluded that HCBd’s “. . . high toxicity to the kidneys, genotoxicity and carcinogenicity is of special concern especially for lifelong dietary low level exposure conditions” and that “[e]vidence of cancer in animals is sufficient to cause concern for populations that may be exposed to low levels of HCBd for long periods.”⁵⁴ Nonetheless, EPA concluded that it will not restrict HCBd under section 6(h) “because the potential for exposure from uses of this chemical is already addressed by actions taken under other statutes and further measures are not practicable.”⁵⁵

Although EPA describes the controls that apply to HCBd under RCRA and the Clean Air Act (CAA), it acknowledges that “a small percentage [is] released to air via stack and fugitive emissions” and that the “destruction and removal efficiency from incineration of HCBd is expected to be significant but not complete, resulting in air releases from incinerator flue gas and land releases from disposal of ash and slag.”⁵⁶ While seemingly low, these releases are clearly significant enough to account for the high levels of HCBd that have been detected across environmental media, in products and in communities near emitting facilities. Thus, EPA should examine whether more stringent controls during manufacturing and waste disposal can feasibly be implemented which eliminate releases to air and soil entirely. Instead, EPA simply assumes without analysis that such controls are impracticable because other laws regulate HCBd releases to the environment. This is insufficient to satisfy EPA’s obligations under section 6(h).

HCBd’s only commercial use is as a byproduct of the manufacture of the solvents perchloroethylene, trichloroethylene and carbon tetrachloride. EPA concludes that “a prohibition on the manufacture of HCBd would effectively prohibit the manufacture of the three solvents” and therefore is impracticable.⁵⁷ However, HCBd is listed as a POP under the Stockholm Convention under Annex A, which requires elimination of the POP’s production and use, and Annex C, which requires reduction of unintentional releases. These listings reflect an expectation that HCBd production will be phased out, and some Stockholm signatories have taken steps in that direction. However, EPA has assumed without any supporting analysis that elimination of HCBd from solvent production is impossible. EPA’s failure to investigate whether this option to eliminate exposure to HCBd is feasible economically and technically violates its responsibilities under section 6(h).

⁵² 84 Fed. Reg. 36742.

⁵³ Report of the Persistent Organic Pollutants Review Committee: Addendum, Risk Management Evaluation on Hexachlorobutadiene, United Nations Stockholm Convention 4 (Oct. 2013), available at <http://chm.pops.int/Portals/0/download.aspx?d=UNEP-POPS-POPRC.9-13-Add.2.English.pdf>

⁵⁴ Id.

⁵⁵ 84 Fed. Reg. 36753

⁵⁶ Id.

⁵⁷ 84 Fed. Reg. 36753

Conclusion

EPA's proposed rule will do little to prevent buildup and accumulation of the PBTs in people and the environment and falls far short of implementing the Agency's obligation under TSCA section 6(h) to reduce exposure to the extent practicable. EPA needs to fundamentally rework the proposed rule so it complies with the law and achieves the significant reductions in PBT exposure that Congress required.

We appreciate the opportunity to submit comments on EPA's proposed PBT rule.

Please contact SCHF counsel, Bob Sussman, with any questions at bobsussman1@comcast.net.

Respectfully submitted.