

July 14, 2023

Department of Ecology, HWTR  
Safer Products for Washington program  
PO Box 47600  
Olympia, WA 98504-7600

**Re: Draft Identification of Priority Chemicals Report to the Legislature: Safer Products for Washington Cycle 2, Implementation Phase 1**

The American Chemistry Council's (ACC) North American Flame Retardant Alliance (NAFRA) in coordination with the International Bromine Council (BSEF) submits the following comments regarding the Washington Department of Ecology's (Department of Ecology) Draft Identification of Priority Chemicals Report to the Legislature: Safer Products for Washington Cycle 2, Implementation Phase 1 (Draft Report).<sup>1</sup> NAFRA's comments focus specifically on the proposed identification of "brominated and/or chlorinated substances" as priority chemicals or chemical classes.

NAFRA appreciates the opportunity to comment on the Department's Draft Report and offers the attached to enhance the scientific accuracy of Ecology's analysis and to focus the efforts of the *Safer Products for Washington* program. If you have questions or would like additional information, please contact me at [robert\\_simon@americanchemistry.com](mailto:robert_simon@americanchemistry.com) or 202-249-6700.

Sincerely,



Robert Simon  
Vice President  
American Chemistry Council

---

<sup>1</sup> Draft Identification of Priority Chemicals Report to the Legislature: Safer Products for Washington Cycle 2, Implementation Phase 1, June 2023. <https://apps.ecology.wa.gov/publications/documents/2304038.pdf>



## **1. Introduction and Overview**

NAFRA and BSEF support chemical safety and appreciate the opportunity to comment on the Draft Identification of Priority Chemicals Report to the Legislature: Safer Products for Washington Cycle 2, Implementation Phase 1 (Draft Report).

Bromine based technologies provide numerous important, benefits and support critical uses including water treatment, reduction of mercury emissions, fire safety, energy storage and generation, production of pharmaceuticals and enhanced quality rubber production.

The Draft Report's recommendation regarding brominated and chlorinated substances is incredibly broad and would cover hundreds of substances that have very different physical, chemical, and toxicological properties as well as uses. Such a broad identification is not supported by the state of the science and is also not consistent with the underlying Safer Products for Washington criteria, as not all of the substances in these broad classes of chemistry meet the required criteria.

Overall, the analysis used to justify the proposed identification of brominated and/or chlorinated substances as priority chemicals or classes of chemicals needs additional scientific rigor and a more targeted approach for these very broad classes of chemistry. The following comments reinforce this and provide additional information that Ecology should consider as it revises the Draft Report.

## **2. The Broad grouping of bromine and chlorine is not appropriate and is not supported by the science.**

As noted below, it is not scientifically accurate or appropriate to group all brominated compounds together, let alone all brominated and chlorinated substances. The substances and sub-categories within these very broad classes of chemistries have very different hazard profiles and potential exposures. As such, the broad assumptions and conclusions drawn across these chemistries are not accurate and consideration of these broad classes of chemistry should be separated.

## **3. It is not scientifically accurate or appropriate to group all brominated substances together.**

The draft report takes an overly broad approach in its characterization of brominated substances. In many cases, the Draft Report makes extremely broad assumptions and mischaracterizations that are not supported by the science, and in some cases are directly contradicted by the state of the science.

As Ecology knows well from Cycle 1, NAFRA has consistently reiterated that the science does not support the broad grouping of organohalogen flame retardants, just one type of brominated chemistry. As we have emphasized throughout our engagement with Ecology,

Department of Health, and the legislature over the last five years, it is not scientifically accurate or appropriate to make broad conclusions or impose a one-size-fits-all approach for all flame retardants or even sub-classes of flame retardants. Not all flame retardants are the same. They are a diverse set of chemicals that vary in property and molecular structure. Chemical and toxicological properties vary widely between various flame retardants and even substances of the same family. Specifications, standards, and regulations therefore need to address specific flame retardants and specific applications and cannot take a “one-size-fits-all” approach.

As previously noted, a report by the National Academy of Sciences (NAS) released in May 2019 concluded that it was not possible to even assess one class of flame retardants (organohalogen flame retardants or “OFRs”) as a group. Instead, the NAS has recommended that each OFR be sorted into one of 14 subgroups based on chemical structure, physicochemical properties, and predicted biologic activity for purposes of further assessment. Key differences between flame retardants are also highlighted within assessments conducted by regulatory agencies such as the U.S. Environmental Protection Agency (EPA), the U.S. Consumer Product Safety Commission, Environment and Climate Change Canada and Health Canada, the European Chemicals Agency, and the European Food Safety Authority, which have taken approaches consistent with the NAS findings to initially screen and evaluate sub-categories or “clusters” of specific flame retardants that may have similar properties but not broad classes or even sub-classes.

So, it is even more scientifically inaccurate and inappropriate to treat all brominated compounds the same. The chemistries included in this category are too diverse to be considered a single chemical class and we are not aware of any other regulatory program that attempts to group these diverse chemistries into a single chemical class. Other regulatory jurisdictions have recognized these differences and these distinctions are important as Ecology revises the Draft Report. To ignore this does a disservice to the integrity of the overall Safer Products for Washington program.

#### **4. The assumptions and conclusions that are the foundation for the Draft Report’s conclusions cannot be extended across all brominated compounds.**

Consistent with the feedback above, the broad conclusions and assumptions in the Draft Report cannot be extended to all brominated compounds.

Indeed, bromine is a naturally occurring substance and has been identified as one of the chemical elements essential for human life. In 2014, Professor Hudson of Vanderbilt University School of Medicine and his team of researchers added bromine as the 28th chemical element essential for human life. This study, published in the journal *Cell*, revealed that bromine is essential for tissue development in all animals, from primitive sea creatures to humans.<sup>2</sup>

---

<sup>2</sup> [http://www.cell.com/cell/fulltext/S0092-8674\(14\)00598-4](http://www.cell.com/cell/fulltext/S0092-8674(14)00598-4)

The Draft Report seems to take information associated with a relatively small subset of historical substances designed for specific uses (e.g., flame retardants and chlorinated pesticides) and seeks to inappropriately extend that information to other different substances with very different chemical profiles and functional uses.

There is significant scientific data and regulatory assessments that demonstrate the differences across this broad range of chemistry. Ecology itself notes in the draft report that “Not all brominated and/or chlorinated substances are hazardous”.

To the extent Ecology seeks to list specific brominated substances, then it must demonstrate that all of the identified substances meet the relevant criteria.

**5. The Draft Report’s recommendations are not supported by Ecology’s own prioritization criteria.**

Ecology notes in the Draft Report that it prioritized the proposed list of chemicals by taking into account existing, effective regulatory structures. Despite this, the majority of uses identified in the Draft Report, and used as examples, actually have robust regulatory frameworks in place, including in many cases active federal regulatory approvals by EPA, FDA and other federal or international regulatory bodies. Several of the identified functional uses are also undergoing risk evaluation under the revised Toxic Substances Control Act (TSCA) with regulatory preemption requirements, so it would be duplicative and counterproductive for the Safer Products for Washington program to focus on these substances. Accordingly, by its own prioritization criteria, this broad class of chemistry should not be identified as a priority by Ecology.

