BY ELECTRONIC MAIL

May 21, 2020

Mr. Greg Harris
Chief
Greenhouse Gas Toxics Emission Inventory Branch
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Proposed amendments to the AB 2588 Emission Inventory Criteria and Guidelines Regulations, updates to the chemical substances list of Appendix A

Mr. Harris:

The undersigned organizations appreciate the opportunity to provide comments on the proposed updates to the chemical substances list (Appendix A) for reporting under the Air Toxics Hot Spots regulation. We are deeply troubled by the significant reporting burden that will result from the addition of such a large number of chemicals, including more than 150 substances and 11 chemical categories identified solely because of the presence of a "functional group" or halogen atom. Moreover, the proposed addition of 70 per- and polyfluoroalkyl substances (PFAS) and 8 PFAS groups duplicates and/or conflicts with emission reporting requirements recently implemented by the US Environmental Protection Agency (USEPA).

We urge the Air Resources Board to scale back the current proposal to focus on a more limited group of individual substances that can be readily identified by reporting companies and that can be appropriately considered by Board staff. A more focused proposal will help to achieve the goals of improving public health in a timely manner without imposing unnecessary requirements on companies. As part of this focused approach, we recommend that the proposal be revised to eliminate substances of categories listed pursuant to Health and Safety Code Section 44321(f). While we acknowledge that ARB can add substances recognized as "presenting a chronic or acute threat to public health when present in the ambient air," we

urge the Board to initiate a separate rulemaking to consider the additions of substances that are not subject to automatic listing under the provisions of Sections 44321(a)-(e) of the Health and Safety Code.

To ensure transparency and to facilitate a rigorous assessment of the scientific basis for including additional compounds under paragraph (f), the underlying toxicological threat or risk associated with each compound proposed for addition should be explicitly identified in accordance with Section 44321. ARB should also provide evidence which demonstrates that each compound can be present in ambient air. This additional information is required for an assessment of the extent to which each compound represents a potential risk to public health from exposure in ambient air. In addition, the individual substances within many of the groups proposed for listing vary significantly in their physical, chemical, and toxicological properties. Consequently, it is inappropriate, and scientifically indefensible, to make broad conclusions about the potential public health impacts associated with these substances.

The undersigned organizations appreciate ARB's interest in transitioning from a traditional chemical-by-chemical approach to one that considers multiple chemicals within a group or class, but caution the Board that such a broader approach must be founded in scientific principles. The importance of a robust scientific process was recently highlighted by the National Academy of Sciences, Engineering and Medicine (NASEM) which noted --

> The class approach relies on using data on tested chemicals to draw inferences about the potential hazard associated with class members that have not been tested. That approach is scientifically supported most strongly when many of the available data support a single conclusion (for example, when a specific toxicity is observed). When class members on which there are data appear to yield discordant findings on an end point, a key question is how to evaluate class members on which there are no data. Several inferences would be possible from the discordant findings, although they will have greater uncertainty than if the findings were concordant. Inferences would include the idea that the class members on which there are no data are similar in toxicity to class members in which there are data – for example, similar to the most toxic chemical or similar to a distribution of observed findings. Each inference could be considered in developing a hazard assessment of the class that would use policy choices to provide appropriate protection of public health.[1]

Before attempting to group multiple chemicals for the purposes of reporting or other regulatory requirements, ARB must first outline the process it will follow to make decisions about the likely similarity of the potential public health impacts of the substances under consideration.

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[1] National Academy of Sciences, Engineering and Medicine. A Class Approach to Hazard Assessment of Organohalogen Flame Retardants. Washington, DC. The National Academies Press (2019), at 41.

While we object to listing of group of substances, generally, we offer the following additional information on the following groups --

- brominated and chlorinated flame retardants
- isocyanates
- PFAS/PFAS chemical functional groups
- phthalates

Brominated and Chlorinated Flame Retardants

The Board proposal would lump multiple organohalogens used as flame retardants together with little consideration for their safety or risk. Such an approach was rejected by NASEM, which concluded that a single class approach in assessing the potential hazards of additive, non-polymeric organohalogen flame retardants (OFRs) was not appropriate.[2] More recently, in October 2019, the U.S. Consumer Product Safety Commission (CPSC) voted as part of its Fiscal Year 2020 Operating Plan to withdraw its Guidance Document on additive, non-polymeric OFRs in certain products that took effect in September 2017. The action taken by the CPSC was influenced by the NASEM Report, which rejected the factual predicate of the Guidance Document.

Among the concerns expressed about OFRs is a desire to avoid the release of highly toxic or corrosive by-products during incineration or uncontrolled burning. Research published last year by the Southwest Research Institute (SwRI), an independent, nonprofit research organization, refutes that claim.[3]

The SwRI study used three replicates of identical rooms for each of the countries tested (United Kingdom, France, and United States) and contained commonly available upholstered furniture and home furnishings for each of the three countries. Test rooms were burned to determine the impact of each country's fire codes on the burning performance of upholstered furniture and an overall furnished room. The research shows that furniture containing more flame retardants burned more slowly and produced less acutely toxic smoke and less total smoke than relatively less flame-retarded upholstered furniture and home furnishings.

Isocyanates

Different isocyanate substances can have different exposure routes, different metabolic pathways, different target organs, and different health hazards. In addition, the physical/chemical properties of the various isocyanates (i.e. mono- isocyanates, di-isocyanates and poly-isocyanates) are very different. For example, phenyl isocyanate and methyl

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[2] Ibid, at 2.

[3] Blais MS *et al.* Comparative room burn study of furnished rooms from the United Kingdom, France and the United States. *Fire Technology 56:489-514 (2019).* https://doi.org/10.1007/s10694-019-00888-8

isocyanate (MIC) are mono-isocyanates and are highly volatile liquids while polymeric methylene diphenyl diisocyanate (MDI) is a viscous liquid with a very low vapor pressure and monomeric MDI is a solid at room temperature. In particular, MIC should not be grouped with the diisocyanates. MIC is a different chemical from diisocyanates. They have considerably different chemical structures as well as physical and toxicological effects. These differences warrant individual consideration of the various isocyanates.

Furthermore, some substances with an isocyanate functional group can be generated from sources not directly linked to production, use, or emission of commercial isocyanate substances. For example, non-commercial emissions of isocyanic acid (ICA) and simple mono-isocyanates can include fossil fuel combustion (engines), tobacco smoking, forest fires, and photochemical transformations of volatile amine substances. There may be potential scenarios where a regulatory threshold for total isocyanate can be exceeded even if all known commercial emissions of isocyanates are fully controlled or eliminated.

PFAS/PFAS Chemical Functional Groups

Together, the listed chemistries encompassed by these two categories essentially cover the entire broad universe of PFAS, which is a general term that includes a wide variety of groups of chemical substances and polymers with very diverse properties. For example, fluoropolymers, one group of PFAS broadly captured on the updated air toxics list, are extremely stable chemistries that are not volatile and are therefore not expected to be detected in air or pose a risk to human health or the environment.

PFAS also vary significantly in their hazard profiles. For instance, not all PFAS and related products are persistent, bioaccumulative, and/or toxic, particularly at concentrations typically present in the environment. While some PFAS remain in the environment for years, other PFAS are short- lived and convert to other substances in a matter of hours or days. Moreover, not all PFAS persist in biological tissues. Certain PFAS compounds, including short-chains, are readily eliminated from the human body and do not bioaccumulate. PFAS also do not share a common toxicity profile. For example, toxicity testing on some PFAS substances shows the potential for chronic toxicity while similar testing on other substances does not show any evidence of such effects. As a result of this significant diversity within the family of PFAS, it is inappropriate to address PFAS as a broad class.

The proposed addition of various PFAS also creates a significant risk of duplication and conflict with the recent addition of 170 PFAS to the federal Toxics Release Inventory (TRI), as required by the National Defense Authorization Act of 2019. Reporting of 2020 releases of these substances from industrial facilities will be available in the fall of 2021. Rather than create the potential for conflicting requirements for PFAS reporting, we urge the Board to defer to the federal TRI program.

Phthalates

Phthalates constitute a broad class of chemicals with a range of physical, chemical and toxicological properties. Numerous risk evaluations conducted in the United States, European Union and Canada have concluded that exposure to phthalates, especially high molecular weight phthalates like di-isononyl phthalate (DINP) and di-isodecyl phthalate (DIDP) is low and of no public health concern to infants, children or adults.

Although "phthalates" are reported to have been measured in ambient air, there are no reports of DINP or DIDP measurements. While there is limited information about ambient concentrations, concentrations of "phthalates" were measured around specific processing or production plants; however measured concentrations outdoor are much lower than indoor measurements. In particular, DINP have been detected in the indoor environment at concentrations below 0.5 micrograms per cubic meter (as it reaches saturation concentration), and is mostly detected in airborne particles or settled dust. All measurements for DINP and DIDP in indoor environments have been reported at levels below health-based limits.

Finally, we suggest that industry needs considerable time to review the list of 800+ new substances, determine whether these compounds are used in California, and whether the compound is used above the thresholds. Please note that these tasks will be much more difficult since CARB has not provided CAS numbers for each of the added compounds. We urge CARB provide sufficient time to complete these tasks.

For these reasons we urge the Board to revise its current proposal to focus on a more limited group of substances and to defer the addition of substances and functional groups under Section 44321 (f) to a separate rulemaking where the criteria for listing can be fully considered.

Thank you for the opportunity to submit these comments. Should you have any questions please contact me at (202) 249-6727 or srisotto@americanchemistry.com.

Sincerely,

Steve Risotto

Stephen P. Risotto
American Chemistry Council

On behalf of the following organizations:

American Coatings Association
American Pistachio Growers
California Business Properties Association

California Citrus Mutual
California Cotton Ginners and Growers Association
California Independent Petroleum Association
Chemical Industry Council of California
Far West Equipment Dealers Association
Metal Finishing Association of Northern California
Metal Finishing Association of Southern California
Western Agricultural Processors Association
Western Independent Refiners Association
Western States Petroleum Association

cc: Members, California Air Resources Board
Mr. Richard Corey, Executive Officer, California Air Resources Board
Ms. Edie Chang, Deputy Executive Officer, California Air Resources Board