

U.S. CONSUMER PRODUCT SAFETY COMMISSION

LOG OF MEETING

SUBJECT: Commissioners Feldman and Dziak held a teleconference with representatives of the American Chemistry Council's North American Flame Retardant Alliance (NAFRA)

DATE OF MEETING: July 30, 2024

LOG ENTRY SOURCE: COPF Staff

LOCATION: Teleconference

CPSC ATTENDEE(S): Commissioner Feldman, Commissioner Dziak, Nicole Brightbill, Thomas Fuller, John Mitchell, Dana Smullen, Mitchell Zaic, and Dylan DeMonte

NON-CPSC ATTENDEES: Owen Jappen (NAFRA), Steve Scherrer (LANXESS AG), Jessica Bowman (Albemarle Corp.), Rajeev Mathur (Albemarle Corp.), Joel Tenney (ICL Group), and Lydia Jahl (Green Science Policy Institute).

SUMMARY OF MEETING: Commissioner Feldman, Commissioner Dziak, and staff met with NAFRA to discuss new science characterizing flame retardant chemistries.

MATERIALS RECEIVED AT THE MEETING: NAFRA shared the attached presentation



North American Flame
Retardant Alliance

JULY 30, 2024

Presentation to Commissioners Feldman & Dziak of the U.S. Consumer Products Safety Commission



Agenda



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Background
& Resources**

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Consumers**

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**Regulatory
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Flame
Retardants**



North American Flame
Retardant Alliance

NAFRA Background & Resources

The North American Flame Retardant Alliance (NAFRA) was formed in March 2011 to serve as the lead advocacy organization in North America for flame retardant producers and users to actively promote responsible methods for developing, handling, and expanding knowledge about current and new flame retardants.

Represents cutting edge fire-safety chemistry & technology



Sponsors scientific research and evaluations to improve understanding of flame retardants



Dedicated to improving fire safety performance in product applications. Products enable plastic applications and advance product sustainability



New sponsored research aggregated on our [website](#).



North American Flame
Retardant Alliance

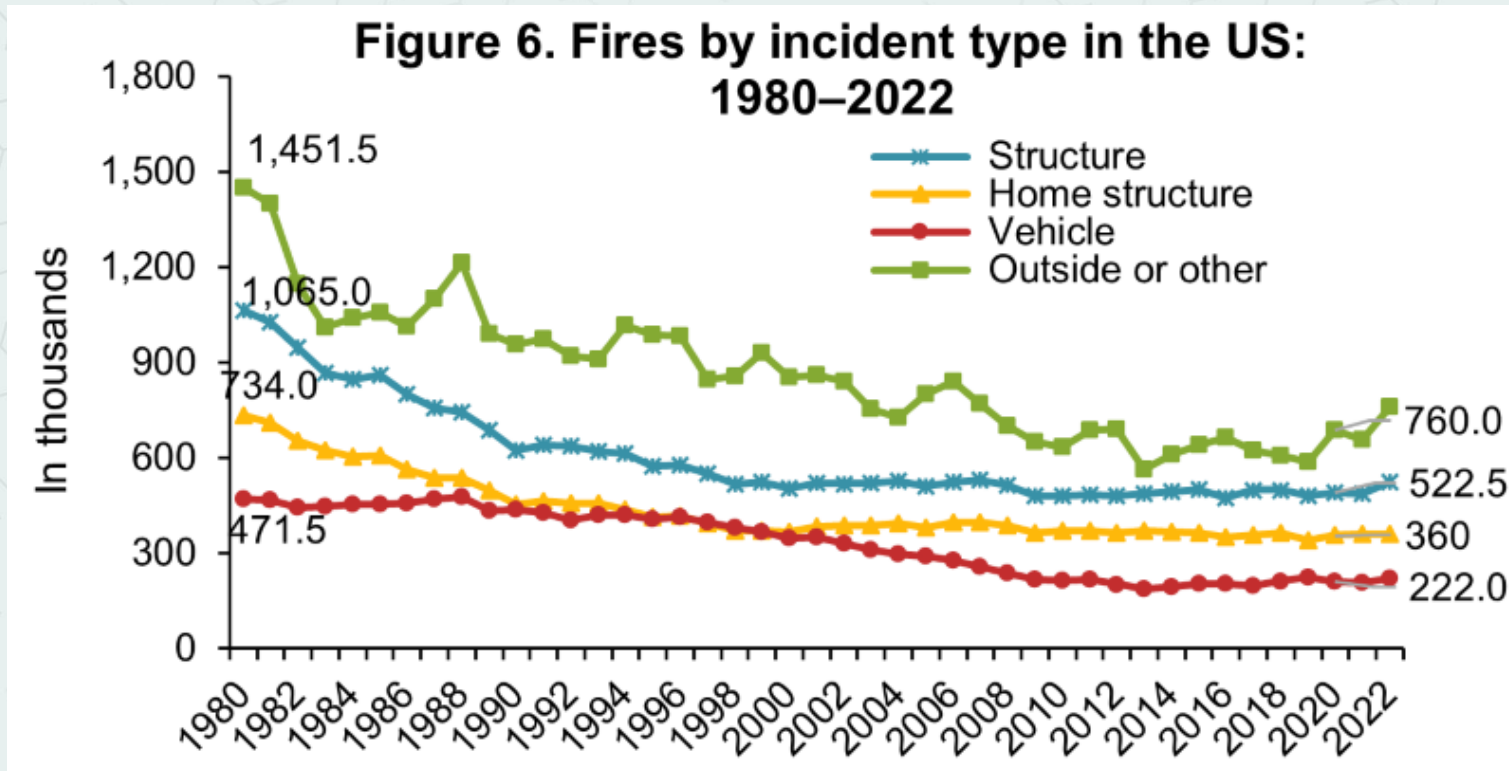
Flame Retardants & Fire Safety for Consumers

Fire Safety & The Role of Flame Retardants

Fires are a real safety issue for the Consumer Products Safety Commission (CPSC) to consider when evaluating product safety.

- CPSC issued over 7,000 recalls of consumer products based on fire hazards, which included recalls of electronics, home appliances, toys, & furniture.**
- Fire safety standards have been developed to ensure public safety.**
- Restrictions could have large impact on use of plastics which enable sustainable and efficient solutions for everyday consumer products.**

Fires are Declining Because of Existing Standards



Since the introduction of strict fire safety standards in the 1970s—standards that included the use of flame retardants—fires have dropped in the United States.

But Fires Are Still a Danger

Despite the improvements in fire safety over the past several decades, fire still represents a real danger across the country.

Home Structure Fires¹: Estimated annual average of 350,800 fires resulting in:

- **2,708 civilian deaths;**
- **11,320 civilian injuries; and**
- **\$7.3 billion in property loss.**

Non-Commercial Vehicle Fires²: Estimated annual average of 212,500 fires resulting in:

- **560 civilian deaths;**
- **1,500 civilian injuries; and**
- **\$1.9 billion in property loss.**

Electrical Malfunction Fires³: Estimated annual average of 26,100 fires resulting in:

- **185 civilian deaths;**
- **850 civilian injuries; and**
- **\$1.5 billion in property loss.**

Application in e-mobility and vehicles of growing importance with increased product electrification.

Sources:

¹NFPA's Report, "Home Structure Fires" by Shelby Hall, Published April 2023

²NFPA's Report, "Vehicle Fires" by Marty Ahrens, Published March 2020

³NFPA's Report, "Electrical Malfunction Fire Trends", Published 2022

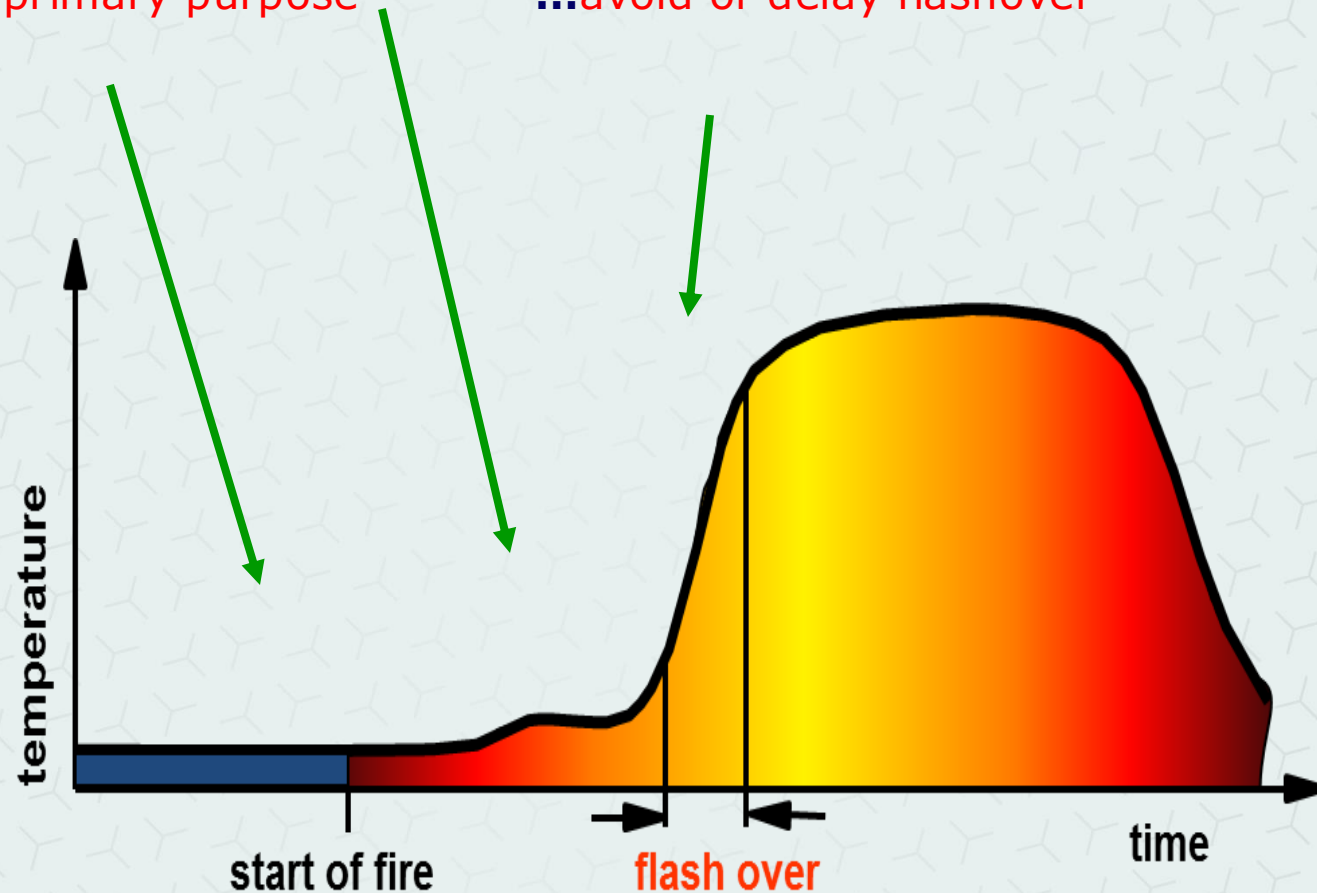
How Flame Retardants Work

***"Ignition is the most important event in the course of a fire"
(no ignition: no fire)***

Ignition handbook, Vyto Babrauskas

Prevent ignition
...primary purpose

Reduce the rate of flame spread:
...avoid or delay flashover



Initial Spark Application

US Market Television with brominated flame retardant



Brazilian Market Television without brominated flame retardant



Fire Develops and Spreads in Non BFR Product

US Market Television

with brominated flame retardant



Brazilian Market Television

without brominated flame retardant



Fire Consumes the Non BFR Product

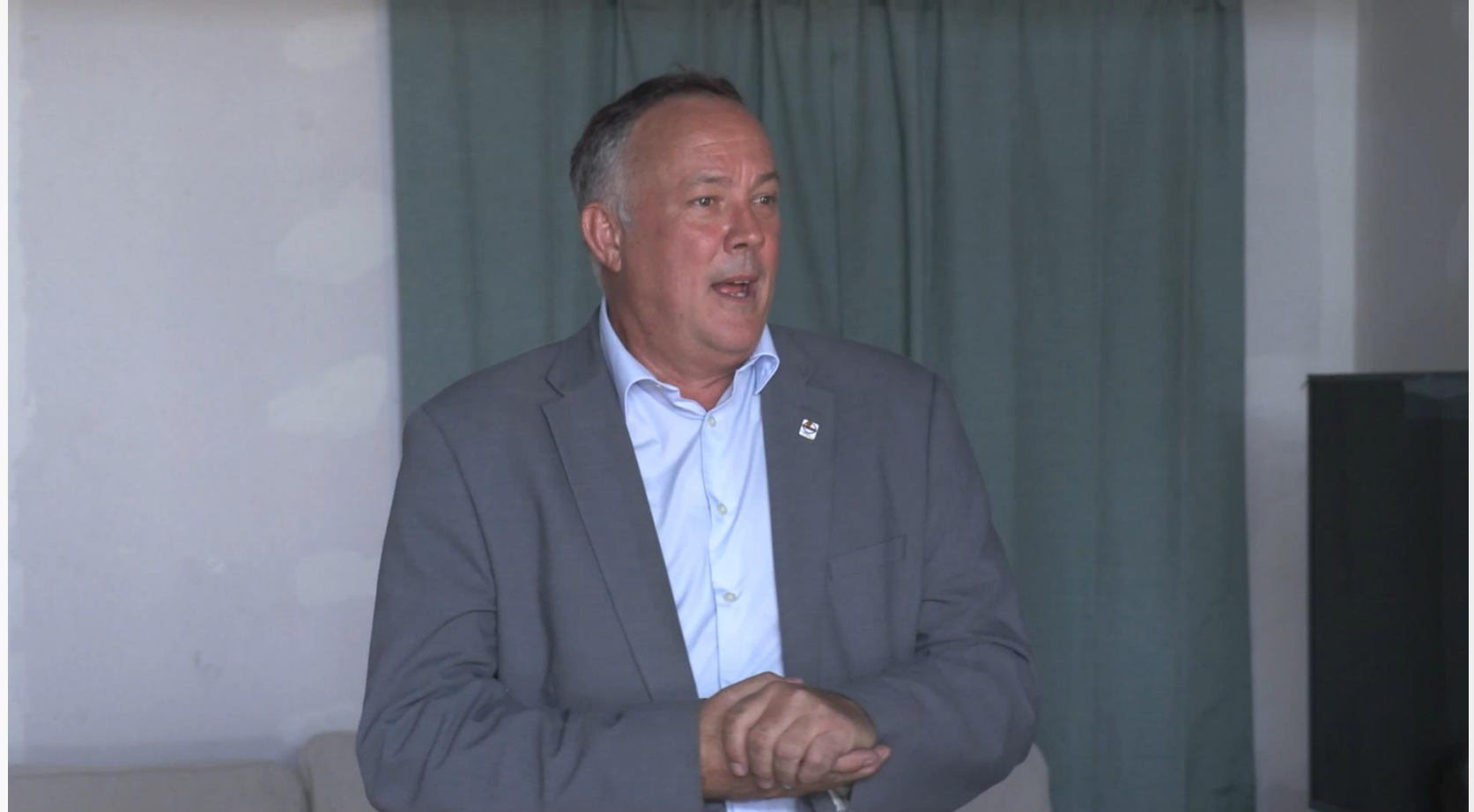
US Market Television
with brominated flame retardant



Brazilian Market Television
without brominated flame retardant



Consumer's React to Flame Retardant Impact



- **Comparison of V0 and non-V0 rated TVs**
- **Demonstrative of FRs significantly reducing the risk of fire hazard**
 - **Important to consider in weighing fire risk vs. FR exposure risk**



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Regulatory Activity and Grouping

**NAFRA
supports an
informed,
nuanced
approach to
assessing
the merits
of unique
chemistries.**

Observed themes in recent years:

- **Inappropriate applications of grouping can lead to a nonworkable implementation.**
 - **WA State initial approach for OFRs in all enclosures was revised to indoor use only; many exemptions still required.**
- **Lack of clarity from broad approaches leads to confusion among marketplace manufacturers and consumers**
- **Attempts to group unrelated chemistries rely on incorrect data interpretation for read-across.**
 - **ECCC's incorrect attempt to read across from decaBDE to DBDPE**
- **Increased understanding by some to more strategically refine groups with available data.**
 - **ECHA's Flame Retardant Strategy demonstrates an appreciation for subgrouping of aromatic chemistries.**



North American Flame
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Other Federal Activity on Flame Retardants

TBBPA Test Order Statuses

| Test | Status |
|---|--|
| Aquatic plant toxicity using Lemna spp. (OCSP 850.4400) | Submitted February 2023. Accepted by EPA in June 2023. |
| Sediment-water Lumbriculus toxicity using spiked sediment (OECD 225) | Test requirement extinguished by EPA following existing data submission. |
| Sediment-water chironomid life-cycle toxicity test (OECD 233) | Test requirement extinguished by EPA following existing data submission. |
| Inhalation sample protocol for flame retardants | Draft protocol submitted & tentatively accepted. Awaiting EPA final approval. |
| Dermal hand wipe sample for flame retardants | Test requirement extinguished by EPA. |
| Dermal absorption (OECD 428) | Awaiting EPA review of draft protocol (Nov 2023). |
| Transfer of chemical from source to settled dust from electrical and electronic products containing TBBPA | Submitted to EPA May 2023. Awaiting acceptance by EPA. |
| Chemical loading on the skin surface from contact with settled dust on electrical and electronic products containing TBBPA | Submitted to EPA July 2023. Awaiting acceptance by EPA. |

TPP Test Order Statuses

| Test | Status |
|--|--|
| Aquatic plant toxicity using Lemna spp. (OCSP 850.4400) | Submitted to EPA Feb 2023. Accepted by EPA May 2023. |
| Algal toxicity (OCSP 850.4500) | Test requirement extinguished by EPA following existing data submission. |
| Sediment-water Lumbriculus toxicity using spiked sediment (OECD 225) | Submitted to EPA September 2022. Accepted by EPA December 2022. |
| Sediment-water chironomid life-cycle toxicity test (OECD 233) | Final report submitted to EPA Oct 2023. Awaiting acceptance by EPA. |
| Earthworm report test (OECD 222) | Submitted to EPA Dec 2022. Accepted by EPA June 2023. |
| Inhalation sampling protocol for flame retardants | Awaiting EPA review of draft protocol. |
| Dermal hand wipe sample for flame retardants | Test requirement extinguished by EPA following existing data submission. |
| Dermal absorption (OECD 428) | Awaiting EPA review of draft protocol . |
| Avian dietary toxicity test (OCSP 850.2200) | Submitted to EPA January 2023. Accepted by EPA May 2023. |
| Avian reproduction test (OCSP 850.2300) | Final report submitted to EPA Oct 2023. Awaiting acceptance by EPA. |

Other Topics of Interest or Questions?

- **Congressional activity**
- **Fire Safety and Vehicles**
 - **State, Federal, and other Standards**
- **Battery safety standards**



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Thank you!

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