

U.S. Consumer Product Safety Commission

LOG OF MEETING

SUBJECT: Chemical Hazards Program. Korean Delegation

DATE: April 16, 2018

TIME: 9:00 a.m. to 11:30 a.m.

PLACE: CPSC Headquarters, Bethesda Towers

ENTRY SOURCE: Michael A. Babich, HSTR

COMMISSION REPRESENTATIVES: Michael A. Babich, HSTR; Xinrong Chen, HSTR; Alice Thaler, HS; Sylvia Chen, EXIP; Richard O'Brien, EXIP; Joel Blank, EXIP.

NON-CPSC REPRESENTATIVES: See attached list of attendees.

SUMMARY:

Richard O'Brien, CPSC Director of International Programs, introduced the participants and presented opening remarks. Michael Babich, Division of Toxicology and Risk Assessment and Toxicology gave a presentation on the CPSC Chemical Hazards Program, followed by a question and answer session. A meeting agenda, list of participants, and slides are attached.

Meeting with Korean Ministry of Environment and Industry Representatives

Monday, April 16

9:00 – 11:00 am

Hearing Room, CPSC Headquarters

AGENDA

- 9:00-9:10 am *Introductory Remarks and CPSC Overview*
Richard O'Brien, Director, Office of International Programs
- 9:10-9:20 am *Introductory Remarks*
Michael Babich, Director, Division of Toxicology & Risk Assessment, Office of Hazard Identification and Reduction

Alice Thaler, Associate Executive Director, Health Sciences, Office of Hazard Identification and Reduction
- 9:20-9:40 am *Introduction of Korean Ministry of Environment: Safe Environment Development from Chemical Substances*
Park Joung Ku, General Director, Department of Chemicals Safety Management, Korean Ministry of Environment (Name TBC)
- 9:40-10:30 am *Chemical Safety*
Michael Babich, Director, Division of Toxicology & Risk Assessment, Office of Hazard Identification and Reduction

Alice Thaler, Associate Executive Director, Health Sciences, Office of Hazard Identification and Reduction
- 10:30-11:00 am Question and Answer

CPSC Participants

Alice Thaler, Associate Executive Director, Health Sciences, Office of Hazard Identification and Reduction

Michael Babich, Director, Division of Toxicology & Risk Assessment, Office of Hazard Identification and Reduction

Richard O'Brien, Director, Office of International Programs

Joel Blank, Regional Product Safety Attaché, Asia Pacific, Office of International Programs

Sylvia Chen, Program Manager for East Asia and Pacific, Office of International Programs

Attendees list

No	Type of business	Organization	Name
1	Electronic components	Samsung Electricity	Choi Sukhwan
2	Chemical Plant	LG Chemical	Yun Kwan Seob
3	Chemical Plant	LG Chemcial	Kim Kyoung ho
4	Semiconductor company	SK Hyunics	Park Nohyeok
5	Chemical Plant	LG Chemcial	Han Sangbong
6	Solar cell maker	Hanwah Q Cell Korea	Lim Bo Young
7	Petrochemical company	Hyundai Oilbank	Kim Euiwha
8	Display production	Samsung Display	Sakongyoungjae
9	Display production	Samsung Display	Bang Ji Hun
10	Geum River Basin Environmental Office	Ministry of Environment	Shin Bongwoo (Leader)
11	Geum River Basin Environmental Office	Ministry of Environment	Jang Sunyoung
12	Geum River Basin Environmental Office	Ministry of Environment	Lee Hyejin
13	Public Corporation	Korea Environment Corporation	Cho Kyungho
14	Public Corporation	Korea Environment Corporation	Moon Mansang
15	Public Corporation	Korea Environment Corporation	Park Donggyu
16	Public Corporation	Korea Environment Corporation	Kim Eunjung



Chemical Hazards Program: U.S. Consumer Product Safety Commission

Michael A. Babich

Directorate for Health Sciences

U.S. Consumer Product Safety Commission

Rockville, MD 20850

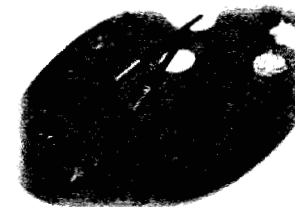
These comments are those of the CPSC staff, have not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

U.S. Consumer Product Safety Commission (CPSC)

- Independent regulatory agency founded in 1973
- Budget of \$ 126 M; staff 545 (FY 2018)
- 5 Commissioners appointed by the President
- Jurisdiction: Products in and around the home, schools, and recreational setting.
 - Generally, products such as food, drugs, cosmetics, medical devices, pesticides, & automobiles not included
 - Does include child-resistant packaging for household chemicals, drugs, & cosmetics

CPSC's Jurisdiction Includes

“. . . any article, or component part thereof, produced or distributed (i) for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, or (ii) for the personal use, consumption or enjoyment of a consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise...”



Section 3(a)(5) of the Consumer Product Safety Act, 15 U.S.C. § 2052 (a)(5)

CPSC's Jurisdiction Does Not Include



- Tobacco products (FDA)
- Drugs, cosmetics, food (FDA, USDA)
- Motor vehicles for road use (NHTSA), aircraft (FAA), boats and watercraft (USCG)
- Pesticides (EPA), medical devices (FDA), workplace products (OSHA and others)

CPSC Statutes Relevant to Chemical Hazards

- Consumer Product Safety Act (CPSA)
 - Establishes the Agency and general procedures
- Federal Hazardous Substances Act (FHSA)
 - Chemical hazards are often addressed under the FHSA
 - FHSA also addresses mechanical and other hazards
- Labeling of Hazardous Art Materials Act (LHAMA)
 - Special requirements for art materials
 - Addresses chronic hazards
- Poison Prevention Packaging Act (PPPA)
 - Child-resistant packaging

FHSA Definition of “Hazardous Substance”

"Any substance or mixture of substances which (i) is toxic, (ii) is corrosive, (iii) is an irritant, (iv) is a strong sensitizer, (v) is flammable or combustible, or (vi) generates pressure through decomposition, heat, or other means, *if such substance or mixture of substances may cause substantial personal injury or substantial illness during or as a proximate result of any customary or reasonably foreseeable handling or use, including reasonably foreseeable ingestion by children.*"

The FHSA is...

- Risk-based—Considers both toxicity and exposure
- Self-enabling—Manufacturers must determine if their products are hazardous & are properly labeled
- If the product is a “hazardous substance” it must describe the hazard and list the hazardous ingredient
- Other regulatory options available if labeling does not adequately address the hazard
- Children’s products that are “hazardous substances” are banned by statute
- Includes acute and chronic effects
- Gives preference to reliable human data
- Regards consumer products as mixtures

The FHSA does not...

- Does not require pre-market approval
- Manufacturers not required to perform toxicity tests
- CPSC cannot require any specific toxicity tests
- Manufacturers are not required to provide ingredients to CPSC
- Manufacturers are not required to list ingredients on the label, except “hazardous” ingredients
- Does not define “non-toxic” or “non-hazardous.”
(Defines “toxic” and “hazardous.”)

Chronic Hazard Guidelines

- Carcinogenicity
- Neurotoxicity
- Reproductive/developmental toxicity
- Exposure
- Bioavailability
- Risk assessment
- Acceptable risk

https://www.cpsc.gov/s3fs-public/pdfs/blk_pdf_chronichazardguidelines.pdf

Risk Management Options

- Information and education
- Voluntary labeling or performance standard
- Mandatory labeling or performance standard
- Recall
- Ban
 - Must apply the least burdensome requirement that adequately addresses the hazard
 - Costs & benefits must be in reasonable balance
 - Convene a Chronic Hazard Advisory Panel (CHAP) for carcinogens, teratogens, or mutagens

CPSC Activities

- Phthalates and phthalate substitutes in children's toys and child care articles
- Organohalogen flame retardants in consumer products
- Crumb rubber in athletic fields and playground surfaces
- Nanomaterials in consumer products
- Methylene chloride in paint strippers
- 3D printer emissions
- Wearable technology
- Lead and other metals in children's products

Phthalates



- Consumer Product Safety Improvement Act of 2008 (CPSIA)
 - Permanently prohibit children’s toys & child care articles containing >0.1% BBP, DBP, or DEHP
 - Interim prohibition of children’s toys that can be placed in a child’s mouth & child care articles with >0.1% DINP, DIDP, or DNOP
 - Convene a Chronic Hazard Advisory Panel (CHAP) to study the effects on children’s health of all phthalates and “phthalate alternatives” as used in children’s toys and child care articles.

<https://www.cpsc.gov/chap>

Final Rule—October 2017

- Made the interim prohibition regarding DINP permanent
 - Expanded the scope from children's toys that can be placed in a child's mouth to all children's toys
- Lifted the interim prohibitions regarding DIDP and DNOP
- Prohibited children's toys and child care articles with >0.1 percent of DPENP, DHEXP, DCHP, or DIBP

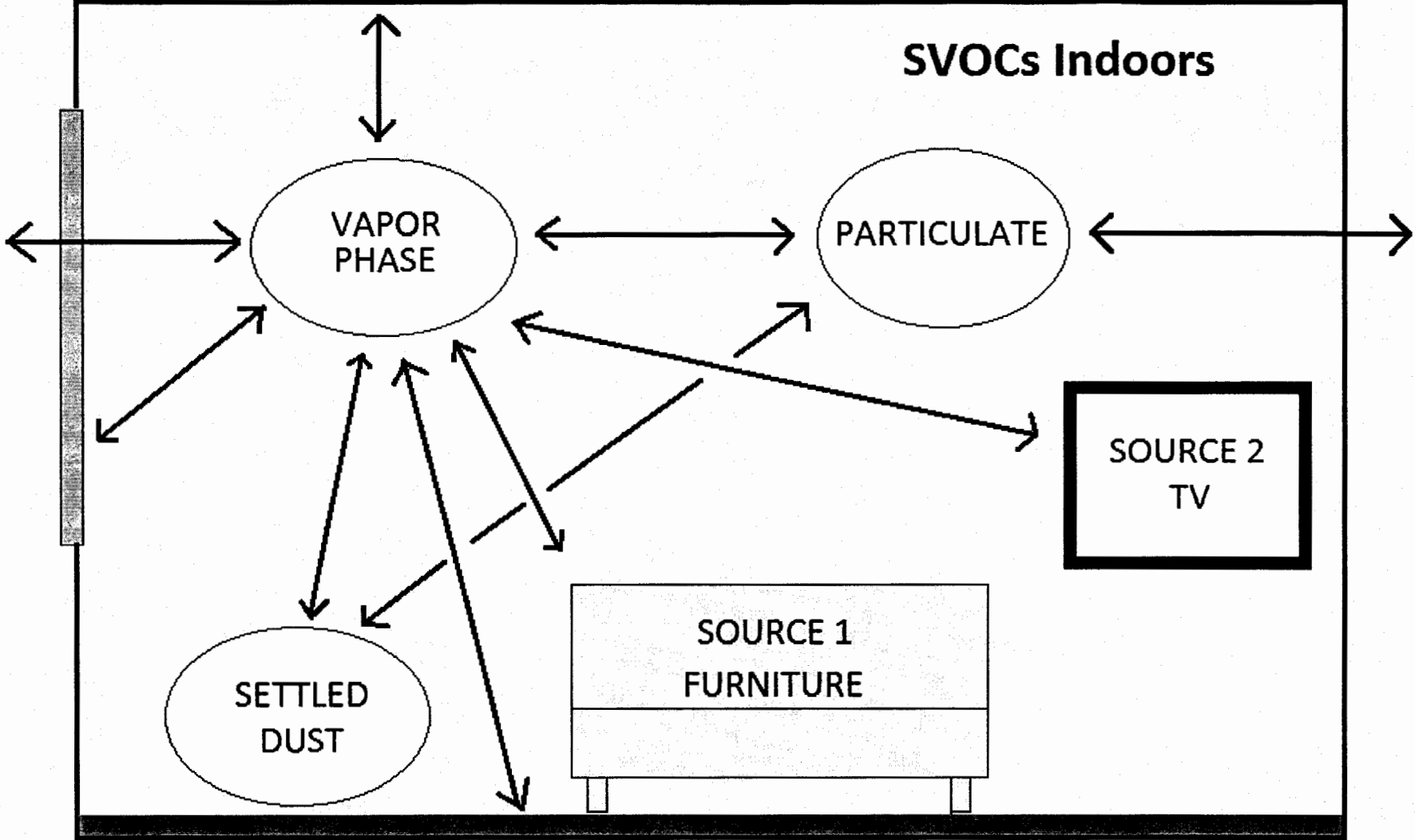
Flame Retardant (FR) Chemicals

- Used in home furnishings, building materials and other consumer products to reduce ignition propensity and flame spread
- Typically used to meet voluntary or mandatory flammability standards
- Many FRs are semi-volatile compounds (SVOCs)
- CPSC activities include:
 - Organohalogen flame retardants (OFRs)
 - FRs in upholstered furniture, mattresses, and children's products

Organohalogen Flame Retardants

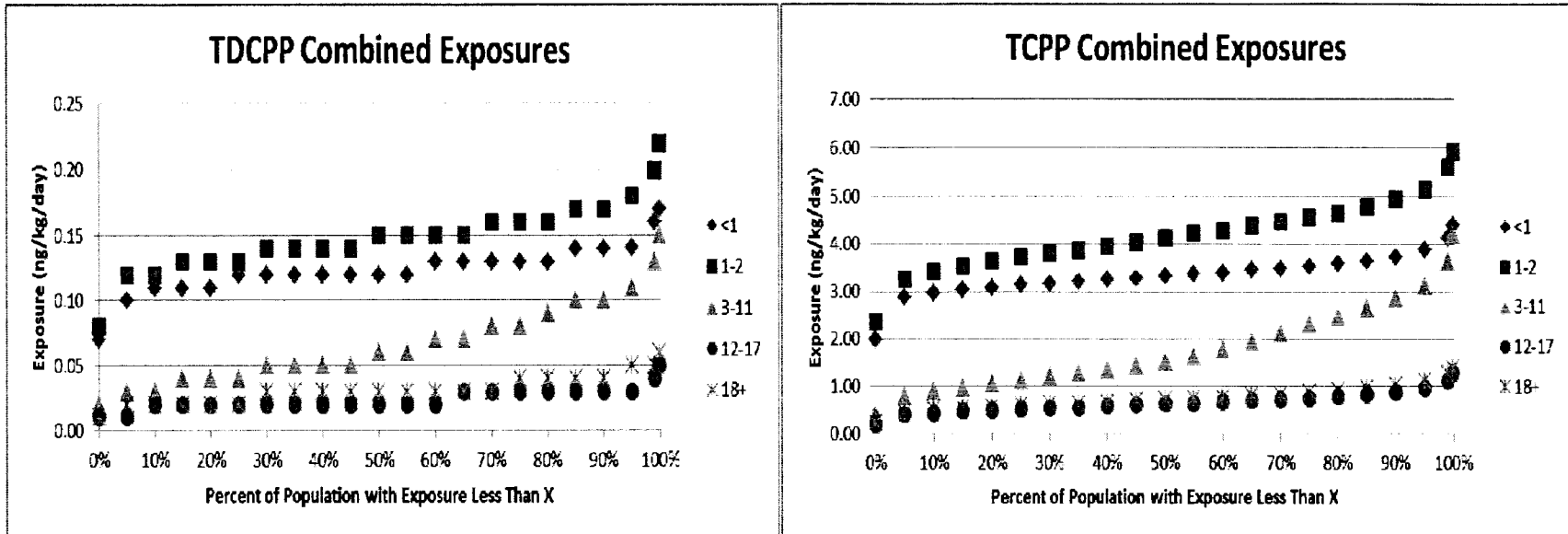
- In September 2017, in response to a petition, the Commission directed the staff to assess the risks from OFRs, as a class, in:
 - Children's products
 - Upholstered furniture
 - Mattresses and mattress pads
 - Plastic casings surrounding electronics
- Working with NAS to determine how to evaluate-OFRs as a class

SVOCs Indoors



Adapted from: Weschler CJ & Nazaroff WW (2008) Semivolatile compounds in indoor air. Atmospheric Environment 42: 9018-9040.

Estimated Exposure to FRs in Dust and Indoor Air In the Home, Child Care, Auto, and Office



- Modeled distribution of cumulative exposure by age group.
- Combines exposures from the home, day care (children), auto, and office (adults)
- TDCPP, tris (1,3-dichloropropyl-2) phosphate; TCPP, tris (chloropropyl) phosphate

Patterson et al. 2016

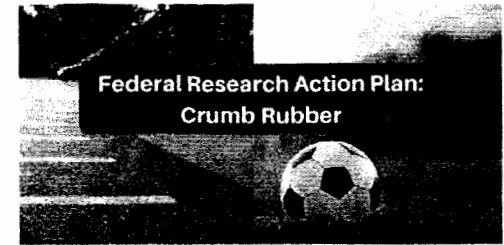
Nanotechnology

- Nanotechnology is an emerging area with many applications in consumer products
For example, sports equipment, wearing apparel, coatings, appliances, electronics, toys, children's products
- CPSC is supporting research aimed at assessing potential human exposure and risks associated with consumer products

Nanotechnology Research

- NIOSH/Harvard University—
 - Toxicity of emissions from nano-enabled laser printers
- NIST—
 - Exposure to nanomaterials from consumer products and household dust
- University of Cincinnati—
 - Nano-prioritization tool & database
 - Systematic literature reviews
- National Library of Medicine—
 - Nanotox fact sheets
 - Nano-enabled products for Household Products Database
- National Nanotechnology Initiative—
 - Workshops on Quantifying Exposure to Engineered Nanomaterials (QEEN) from Manufactured Products

Crumb Rubber & Playground Surfaces



- Crumb rubber made from recycled tires
- Used as infill in athletic fields, mulch, & playground surfaces
- Contains multiple compounds of potential concern: PAHs, VOCs, SVOCs, metals
- Interagency group with CDC & EPA
- CPSC focusing on playground surfaces
- See CPSC Crumb Rubber Information Center for additional information

<https://www.cpsc.gov/safety-education/safety-education-centers/crumb-rubber-safety-information-center>