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ASSEMBLY COMMITTEE ON  
ENVIRONMENTAL SAFETY AND TOXIC MATERIALS

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To: Members of the Assembly Committee on Environmental Safety & Toxic Materials

From: Assemblymember Luis Alejo, Chair

Subject: Oversight Hearing on Safer Consumer Products (Green Chemistry)  
Regulations: Priority Products

The Assembly Environmental Safety and Toxic Materials Committee (ESTM) oversight hearing on Tuesday, May 13, 2014, is the sixth ESTM hearing on California's Green Chemistry program. The May 13th hearing will focus on the Priority Product list released by the Department of Toxic Substances Control (DTSC) on March 13, 2014, as part of the Safer Consumer Products (SCP) regulations.

### Background

#### **Green Chemistry.**

Green Chemistry, as defined in *Green Chemistry: Theory and Practice*, is "the utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products."<sup>1</sup> For the last century, environmental protection has concentrated on capturing and storing hazardous waste. Green Chemistry is a fundamentally new approach to environmental protection, transitioning away from managing hazardous chemicals at the end of the life-cycle to reducing or eliminating their use altogether. Green Chemistry encourages cleaner and less-polluting industrial processes, while creating new economic opportunities in the design and use of chemicals, materials, products, and processes.

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<sup>1</sup> Paul Anastas and John Warner in *Green Chemistry: Theory and Practice* (Oxford University Press: New York, 1998).

## **Legislative Oversight of the Green Chemistry Regulations.**

The California legislature recognized the principle of Green Chemistry by enacting two landmark pieces of legislation, AB 1879 (Feuer, Chapter 559, Statutes of 2008) and SB 509 (Simitian, Chapter 560, Statutes of 2008). These bills lay the statutory foundation for the state's Green Chemistry program and intend to establish a comprehensive, life-cycle approach to chemicals policy.

The structure for regulatory action required by AB 1879 is broad and general. Rather than specify particular chemicals or explicit regulatory action on those chemicals, the statute relies on State agencies, primarily DTSC, to set up a process to identify and evaluate chemicals of concern and the products in which they are found, and to assign appropriate regulatory action for those chemicals and products. This unique statutory approach anticipates State agencies playing a greater role in developing strategies and policies designed to meet the general objectives of the statute. Faced with significant agency discretion, the legislature has an important oversight obligation to assure that both the letter of the law, as well as the spirit of the law, is complied with. This oversight hearing is part of the California State Assembly's responsibility to ensure that broad agency authority is utilized in the most effective and efficient manner.

The key oversight issues to be addressed in this hearing include:

- What is the process that DTSC has undertaken to implement AB 1879 (Feuer, 2008) up to this point?
- How did DTSC create the initial Priority Products list as part of SCP regulations?
- What are the next steps that DTSC will take to reduce exposure to toxic chemicals in the identified Priority Products?
- What are the next steps that DTSC will take to reduce toxic chemicals in consumer products through the SCP regulatory process?
- What can we, as a state, do to ensure the creation of safer substitutes for hazardous ingredients in consumer products sold in California?

## **Statutory Requirements for the California Green Chemistry Regulations.**

The bulk of the statutory requirements for establishing regulations governing the Green Chemistry program was included in AB 1879 in Health and Safety Code (HSC) Section 25252, et seq. Its companion bill, SB 509, in HSC Section 25251 and 25256, et seq. also includes provisions related to the regulations. AB 1897 requires DTSC to adopt regulations that fulfill two major requirements: 1) establish a process to *identify and prioritize* chemicals or chemical ingredients in consumer products that may be considered a chemical of concern; and 2) establish a process for *evaluating* chemicals of concern in

consumer products, and their potential alternatives, to determine how best to limit exposure or to reduce the level of hazard posed by the chemical.

Identifying and prioritizing chemicals. AB 1897 (HSC Section 25252) requires DTSC to adopt regulations to establish a process to *identify and prioritize* chemicals or chemical ingredients in consumer products that may be considered chemicals of concern. When identifying and prioritizing chemicals, DTSC must reference and use available information; establish evaluation criteria that include the traits, characteristics and endpoints of chemicals and their alternatives; and consider, at a minimum, the following:

1. The volume of the chemical in commerce;
2. The potential for exposure to the chemical in a consumer product; and,
3. Potential effects on sensitive subpopulations, including infants and children.

Evaluating chemicals of concern and their potential alternatives. AB 1897 (HSC Section 25253) requires DTSC to adopt regulations to establish a process for *evaluating* chemicals of concern in consumer products, and their potential alternatives. The statutory goal of the regulations is to determine how best to limit exposure or to reduce the level of hazard posed by chemicals of concern.

Potential alternatives and life-cycle analysis. The regulations adopted pursuant to HSC Section 25253 must establish a process that includes an evaluation of the availability of potential alternatives and potential hazards posed by those alternatives, as well as an evaluation of critical exposure pathways. This process must include a life-cycle assessment that considers issues such as product function or performance; materials and resource consumption; water and air quality impacts; production, in-use, and transportation energy inputs; greenhouse gas emissions; waste and end-of-life disposal; and public health, economic and environmental impacts.

Regulatory responses. HSC Section 25253 also requires that the regulations specify the range of regulatory responses that DTSC may take following the completion of the alternatives analysis. The regulatory responses include, but are not limited to, the following actions:

1. Not requiring any action;
2. Imposing requirements to provide additional information needed to assess a chemical of concern and its potential alternatives;
3. Imposing requirements on the labeling or other type of consumer product information;
4. Imposing a restriction on the use of the chemical of concern in the consumer product;
5. Prohibiting the use of the chemical of concern in the consumer product;
6. Imposing requirements that control access to or limit exposure to the chemical of concern in the consumer product;

7. Imposing requirements for the manufacturer to manage the product at the end of its useful life, including recycling or responsible disposal of the consumer product;
8. Imposing a requirement to fund Green Chemistry challenge grants where no feasible safer alternative exists; or
9. Any other outcome the department determines accomplishes the requirements of this article.

Additional statutory requirements. Statute places additional requirements on DTSC while developing the Green Chemistry regulations, including that DTSC must establish a Green Ribbon Science Panel (GRSP) to be composed of members with specified areas of expertise. The GRSP is an advisory body that counsels DTSC on scientific and technical matters in support of the goals of significantly reducing adverse health and environmental impacts of chemicals used in commerce, as well as on the overall costs of those impacts to the state's society by encouraging the redesign of consumer products, manufacturing processes, and approaches.

### **Summary of the Regulatory Process.**

To implement the Green Chemistry statutes, DTSC created what it called a "four-step continuous, science-based, iterative" regulatory process, which it deemed the "Safer Consumer Products" regulations, to identify safer consumer product alternatives. Per DTSC, the regulatory steps are listed below:

- 1) Chemicals – The regulations establish an immediate list of Candidate Chemicals (~1,200) based on the work already done by other authoritative organizations, and specify a process for DTSC to identify additional chemicals as Candidate Chemicals (CCs).
- 2) Products – The regulations require DTSC to evaluate and prioritize product/Candidate Chemical combinations to develop a list of "Priority Products" for which Alternatives Analyses must be conducted. A Candidate Chemical that is the basis for a product being listed as a Priority Product is designated as a Chemical of Concern (COC) for that product and any alternative considered or selected to replace that product.
- 3) Alternatives Analysis – The regulations require responsible entities (manufacturers, importers, assemblers, and retailers) to notify DTSC when their product is listed as a Priority Product. DTSC will post this information on its web site. Manufacturers (or other responsible entities) of a product listed as a Priority Product must perform an Alternatives Analysis for the product and the COCs in the product to determine how best to limit exposures to, or the level of adverse public health and environmental impacts posed by the COCs in the product.
- 4) Regulatory Responses – The regulations require DTSC to identify and require implementation of regulatory responses designed to protect public health and/or the environment, and maximize the use of acceptable and feasible alternatives of least

concern. DTSC may require regulatory responses for a Priority Product (if the manufacturer decides to retain the Priority Product), or for an alternative product selected to replace the Priority Product.

### **The Safer Consumer Products Regulation Development Process.**

Beginning in 2009 and throughout 2010, DTSC, under the Schwarzenegger administration, released a series of documents in preparation for promulgating the required regulations. In June 2010, DTSC released draft regulations and in September 2010, it released proposed regulations (R-2010-05). The proposed regulations were then substantially amended in November 2010. The regulations were never finalized and were eventually withdrawn.

On October 31, 2011, under the Brown administration, DTSC released informal draft regulations (R-2011-02), which were significantly different than previous draft and proposed regulations. On May 18, 2012, DTSC released the revised SCP Informal Draft Regulations, after which it held workshops and more than a half dozen public comment periods for various aspects of the regulations. On August 28, 2013, the final SCP regulations were approved by the Office of Administrative Law (OAL File No. 2013-0718-03 S) and were filed with the Secretary of State. The SCP regulations (Cal. Code Regs., Division 4.5, Title 22 Chapter 55) took effect on October 1, 2013, and DTSC released the initial Priority Products for consideration under the SCP regulations on March 13, 2014.

This hearing is examining the regulatory process up to this point, with a focus on the development of the Priority Products list and future action under the SCP regulations.

### **2014 Priority Products.**

According to DTSC, a Priority Product is a consumer product that contains one or more chemicals—known as Candidate Chemicals—that have a hazard trait that can harm people and the environment. On March 13, 2014, DTSC released the initial list of Priority Products for consideration of regulation under the SCP regulations. Publication of the draft list of products imposes no new regulatory requirements on manufacturers until DTSC finalizes it by adopting regulations.

The draft initial Priority Products list identifies three products:

1. Spray Polyurethane Foam (SPF) Systems containing unreacted diisocyanates;
2. Children's Foam Padded Sleeping Products containing Tris(1,3-dichloro-2-propyl) phosphate or TDCPP; and
3. Paint and Varnish Strippers, and Surface Cleaners with methylene chloride.

The following information on each Priority Product was provided by DTSC.

### Spray Polyurethane Foam (SPF) Systems Containing Unreacted Diisocyanates.

SPF systems are used for home and building insulation, weatherization, sealing and roofing. The systems are designed to be sprayed directly onto walls, floors and roofs, creating insulation from air and moisture or sealing cracks. Exposure to diisocyanates generally occurs when you breathe in or come into skin contact with vapors, aerosols and dust associated with SPF materials.

According to DTSC, diisocyanates in unreacted SPF systems have been identified as a leading cause of occupational asthma in the United States and the European Union. The chemical is widely used – about 50 percent of SPF products on shelves today are comprised of diisocyanates. DTSC selected these products due to their potential for adverse impacts on public health, including fatalities, lung damage, asthma, and respiratory problems and potential exposure to people who use them.

### Children's Foam Padded Sleeping Products Containing Tris (1,3-dichloro-2-propyl) phosphate (TDCPP).

TDCPP is one of the most commonly used flame retardants found in sleeping products that are widely used by infants and toddlers in places such as daycare centers. Example products include:

- Nap mats with polyurethane foam;
- Juvenile product pads in soft-sided portable cribs;
- Infant travel bed foam;
- Portable infant sleeper foam;
- Playard foam;
- Play pen foam;
- Bassinet foam;
- Nap cots with foam pads;
- Car bed foam pads; and
- Foam sleep positioners.

TDCPP is a cancer-causing and hormone-disrupting chemical. It was removed from use in children's pajamas in the 1970s due to health concerns, but is still found in other products. This chemical can escape into the air and bind to dust, making babies especially vulnerable because they sleep for long hours on these mats where they breathe and ingest the surrounding dust. DTSC has selected children's foam padded sleeping products because of TDCPP's adverse impacts on public health and potential exposure to children who use them. TDCPP accumulates in the environment and has been found in California water bodies and sediments.

Paint and Varnish Strippers, and Surface Cleaners with Methylene Chloride.

Various paint or varnish removers, paint strippers, and/or surface cleaners contain methylene chloride as a solvent. These products are generally used to remove old paint, varnish or other finishes to reveal an object's original surface and also to clean an underlying surface. Methylene chloride enters the body through inhalation of the vapors, absorption through the skin, ingestion, or exposure through contaminated water and air near sources of emissions.

Use of this product has resulted in several deaths in California, and methylene chloride causes cancer and other chronic health effects.

