



November 4, 2009

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Safer Alternative Comments
Department of Toxic Substances Control
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RE: Department of Toxic Substances Control's Green Chemistry Straw Proposal

IPC – Association Connecting Electronics Industries® appreciates the opportunity to comment on the Department of Toxic Substances Control's (DTSC) green chemistry draft straw proposal (hereafter referred to as straw proposal). IPC is a strong advocate of environmental regulations that provide an environmental and economic benefit and protect human health. IPC is seriously concerned that the straw proposal will fail to improve the health and safety of California's citizens because the proposed scope is unwieldy and un-implementable. IPC believes that in order for green chemistry to be a successful program the scope of covered products must be significantly narrower and focused on those products and chemicals to which the public are most commonly exposed. A targeted, prioritized approach will allow industry and DTSC to effectively use available resources. Should DTSC wish to expand the scope of covered products and chemicals, a phased-in approach would ensure that all products and chemicals of concern are eventually covered in the regulation. IPC is also concerned that the proposed one year time frame for alternatives assessments is impractical for companies to comply with and DTSC to enforce. The citizens of California, DTSC and industry would all be better served by a more manageable approach to a green chemistry regulation.

I. About the IPC

IPC, a global trade association, represents all facets of the electronic interconnection industry, including design, printed board manufacturing and electronics assembly. Printed boards and electronic assemblies are used in a variety of electronic devices that include computers, cell phones, pacemakers, and sophisticated missile defense systems. IPC has over 2,700 member companies, including over 250 member companies located in California. As a member-driven organization and leading source for industry standards, training, market research and public

policy advocacy, IPC supports programs to meet the needs of an estimated \$1.7 trillion global electronics industry.

IPC is heavily involved in a number of voluntary environmental initiatives including several of EPA's Design for the Environment partnership projects, the development of the Electronic Product Environmental Assessment Tool (EPEAT) standard¹, and the development of a green chemistry standard through the American Chemical Society and National Standards Foundation.

II. DTSC Should Adhere to the Original Plan for a Green Chemistry Regulation

IPC strongly encourages DTSC to adhere to its original science-based, lifecycle approach to evaluating chemicals under a green chemistry regulation. DTSC initially envisioned a regulation that would move California toward a cradle-to-cradle economy, which focuses on a product's lifecycle and attempts to ensure minimal waste or pollutants are produced at any stage of a product's life. DTSC's straw proposal directly undermines this goal by proposing a list of chemicals to ban from products sold in California. Electronics manufacturers use certain chemicals of concern because of their unique energy efficiency, safety or performance characteristics when no viable or environmentally-preferable substitutes exist. Banning chemicals without full consideration of the full environment, social and economic impacts often results in unintended environmental consequences. For example, review of the U.S. Environmental Protection Agency (EPA) Lead-Free Solder project² illuminates the environmental trade-offs inherent in chemical substitutions. The study evaluated the environmental impacts of tin-lead solder versus lead-free alternative solders. According to the study, the increased energy use associated with the higher operating temperatures required for manufacturing lead-free soldered electronics was projected to cause higher air pollution, acid rain, stream eutrophication, and global warming impacts than tin-lead soldered electronics. Listing chemicals to be banned without conducting thorough, comprehensive alternatives assessments will inevitably lead to inadvertent negative environmental impacts.

III. DTSC Green Chemistry Should Complement Existing Efforts

IPC appreciates the intentions of California's green chemistry regulation. However, the straw proposal is overambitious and un-implementable. Due to California's limited resources, development, implementation and enforcement of such an aggressive regulation is highly unlikely. DTSC might consider developing a regulation that takes advantage of work that is currently being done elsewhere. In Europe, the Registration, Evaluation and Authorization of Chemicals (REACH) regulation³ regulates all chemicals in commerce. Europe has devoted a

¹ <http://www.epeat.net/>

² U.S. Environmental Protection Agency. August 2007. *Solders in Electronics: A Life Cycle Assessment*. Available at <http://epa.gov/dfe/pubs/solder/lca/index.htm>.

³ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European

significant amount of resources and an entire agency, the European Chemicals Agency (ECHA), toward developing and implementing REACH. ECHA is exclusively dedicated to evaluating chemicals, identifying risks and finding viable alternatives to chemicals of concern identified under REACH. Under REACH, an enormous amount of data and testing will be done on the use of chemicals. This data will include inherent hazard characteristics, exposure scenarios, and how much of the chemical is used annually. DTSC should examine how they can utilize this data in their quest to promote green chemistry in California.

IV. A Narrow Product Scope is Vital for Feasibility

IPC believes DTSC should initially limit the scope of the regulation to the nine product categories identified in the first section of the straw proposal. These nine product categories include products commonly used by consumers. The marketplace will be severely disrupted if DTSC attempts to regulate all products sold in California at one time. Some manufacturers may choose to stop selling a product in California all together because they simply cannot comply with such a far-reaching regulation. Other manufacturers may reformulate their products in order to comply which could affect the performance of the product. Additionally, compliance with these regulations will likely result in increased prices to California consumers. A regulation that is focused on specific product categories will allow DTSC to use available resources more efficiently and implement a manageable regulation. As this program matures DTSC may choose to add additional product categories.

V. Prioritizing Chemicals of Concern is Essential for an Effective Regulation

IPC believes that DTSC has taken on an enormous, unmanageable task by proposing to regulate hundreds of chemicals at once. Obtaining information about chemicals in products is not a simple task. When the European Union released the Restriction of Hazardous Substances (ROHS) Directive⁴ that restricts six chemicals in electronics products, it took the electronics industry several years to determine whether those six chemicals were in their products because the electronics supply chain is extremely complex. Due to confidentiality issues in the supply chain, an electronics manufacturer will typically know what is not in their product; gathering information on additional chemicals while require time and effort to gather that information.

DTSC needs to prioritize the chemicals of concern in order to have a manageable, effective regulation. Prioritizing the chemicals of concern and implementing a phased-in approach will give industry adequate time to determine whether their product contains a chemical(s) of concern and get a better understanding of what chemicals are in their products. If DTSC attempts to

Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC, and 2000/21/EC.

⁴ Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on restriction of the use of certain hazardous substances in electrical and electronic equipment <http://www.rohs.gov.uk/>

regulate the hundreds of chemicals identified in the straw proposal all at once, the agency will not be able to enforce the regulation. DTSC will be inundated by the thousands of alternatives assessments for each use of each of the hundreds of regulated chemicals. By addressing hundreds of chemicals of concern at once, the extremely hazardous chemicals will be lost in the shuffle and may not be adequately addressed. Using the prioritized list of chemicals of concern, DTSC can phase-in additional chemicals at an orderly, manageable pace, resulting in an efficient and effective green chemistry regulation.

There are regulations in effect that DTSC could use as a guide to evaluate and prioritize the chemicals of concern identified in the straw proposal. The REACH regulation and Canada's Chemical Management Plan⁵ are just two examples of chemicals regulations that have used prioritization to implement a manageable and enforceable chemicals regulation. DTSC may wish to look to Europe and Canada's plans when developing their own method for prioritizing chemicals.

VI. Alternatives Assessment Criteria are Unrealistic and Burdensome

DTSC's proposed one year time frame to conduct an alternatives assessment is unrealistic. For example, the EPA's Design for the Environment (DfE) Flame Retardant in Printed Circuit Boards Partnership⁶ has been working for three years to evaluate alternatives for certain flame retardants found in printed circuit boards. When evaluating alternatives, drop-in replacements are rare, but instead often require consideration of the entire product, a process that often takes several years. DTSC should give industry a minimum of three years to develop suitable, viable alternatives for the chemicals of concern.

DTSC should provide guidance on what should be included in an alternatives assessment to ensure that the desired information is produced. DTSC should strongly consider forming and participating in partnerships that include all willing and affected stakeholders. Partnerships have the ability to bring the best resources and expertise together so that the alternatives assessment will provide valuable information that industry and DTSC can use.

VII. Protection of Confidential Business Information is Critical

DTSC should be mindful of the need to protect confidential business information (CBI) before requiring product ingredient disclosures on a public website. Many companies are appropriately concerned with CBI being readily available. It is common for companies to withhold certain information about what is contained in their products because that information is proprietary. DTSC needs to ensure that CBI is protected.

⁵ <http://www.chemicalsubstanceschimiques.gc.ca/en/>

⁶ <http://www.epa.gov/dfe/pubs/projects/pcb/index.htm>

VIII. Conclusion

IPC is a strong advocate for scientifically-based environmental regulations that improve environmental conditions, protect human health, and stimulate the economy. It is essential for DTSC to scale down the scope of the green chemistry straw proposal in order to implement a feasible regulation. If DTSC attempts to take on too much at one time, the entire program will fail. DTSC, industry and citizens of California would be better served by an incremental program that implements a phased-in approach to chemicals regulations. By taking one step at a time DTSC will be better able to enforce the regulation, industry will be better equipped to comply with the regulation, and the public can rest assured that they are protected from harmful chemicals.

IPC thanks DTSC for the opportunity to comment and encourages the agency to take our suggestions into strong consideration.

Sincerely,

Stephanie Castorina
Manager, Environmental Programs