



Green Chemistry Alliance

Committed to Product Sustainability in the Global Economy

Alliance of Automobile
Manufacturers

American Chemistry Council

American Forest & Paper
Association

California Chamber
of Commerce

California League of Food
Processors

California Manufacturers
& Technology Association

California Paint Council

California Restaurant
Association

California Retailers
Association

Can Manufacturers Institute

Chemical Industry Council of
California

Citizens for Fire Safety
Institute

Consumer Healthcare
Products Association

Consumer Specialty Products
Association

Grocery Manufacturers
Association

Industrial Environmental
Association

Metal Finishing Associations
of Northern and Southern CA

National Paint and Coatings
Association

Personal Care Products
Council

Plumbing Manufacturers
Institute

Soap & Detergent Association

TechAmerica

Toy Industry Association

Western Plant Health
Association

Western States Petroleum
Association

06/24/09

Maziar Movassaghi,
Acting Director
Department of Toxic Substances Control
California Environmental Protection Agency
1101 I Street, 25th Floor
Sacramento, CA 95814

Re: Comprehensive Proposal for the Implementation of AB 1879 (2008)

Dear Director Movassaghi:

On behalf of the numerous trade associations and individual companies which comprise the Green Chemistry Alliance (GCA), we are pleased to submit the following proposal regarding the implementation of AB 1879 (Feuer) which together with its companion bill SB 509 (Simitian) was signed into law by Governor Schwarzenegger in September of 2008. GCA believes this comprehensive proposal, if adopted, will enable the Department of Toxic Substances Control (DTSC) to fully and successfully implement the subject legislation which will in turn enhance public health and environmental protection while respecting confidential business information and promoting principles of sustainable development.

The GCA has its roots in a group of business trade associations and companies that lobbied effectively during the closing weeks, days and hours of the 2008 California legislative session in support of bi-partisan measures to create a new science based framework for chemicals management. The driving force behind the legislation was a broad based desire for state regulators, rather than the legislators, to exercise their expert scientific and engineering judgment and experience when determining appropriate regulatory actions affecting *chemicals of concern in consumer products*. In the wake of this groundbreaking legislation, the GCA was formalized for the purpose of constructively informing the implementation effort such that the promulgated regulations remain true to the objective and scientific ideals of the authorizing legislation.

The following conceptual regulatory proposal by the Green Chemistry Alliance represents hundreds of hours of focused effort over a period of months by a broad array of individuals from coast to coast with science, engineering, toxicology, R&D, manufacturing and legal backgrounds and possessing significant expertise in state, national, and international chemical management policy. The proposal is a forward looking approach to identify, prioritize, evaluate and regulate the highest priority *chemicals of concern in consumer products*; and to promote truly safer alternatives on the basis of comparative multi-media life-cycle evaluation. The proposal consists of a comprehensive set of regulatory concepts which GCA believes fully satisfy the substance and intent of legislation; and will allow timely implementation in an orderly and economically responsible manner.

The Green Chemistry Alliance believes the concept regulatory proposal detailed on the following pages is consistent with the guiding principles of the Alliance (attachment 1), and will fully and successfully implement the goals of AB 1879 and Governor Schwarzenegger's California Green Chemistry Initiative. This proposal if adopted will enhance public safety and environmental protection, and effectively promote the development of green products.

The task of chemicals management is a long-term endeavor driven by ever changing developments in science. Regardless of the resources directed toward development of data, there will always be more questions to ask and more data to gather – it is after all the nature the scientific process. The issue is not whether there is a data gap; but rather, how can the state manage its finite resources to best identify and prioritize the uses of the chemicals of greatest concern in consumer products? In the current and foreseeable economic climate, Californian must adopt regulations that focus on exposures to substances in consumer products sold or used in the state. The regulatory concept proposed by GCA “casts a wide net” which will result in an initial set of more than 2,000 chemicals for consideration and further evaluation.

These proposed regulations will drive California's economy toward the development of safer alternatives for consumer products while simultaneously providing a balanced and sustainable approach. We thank you for your consideration and we urge the department to adopt this framework.

Sincerely,

Green Chemistry Alliance Steering Team
(*Alphabetical order*)

Curt Augustine
Alliance of Automobile Manufacturers

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Personal Care Products Council

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California Chamber of Commerce

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American Chemistry Council

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Chemical Industry Council of CA

Attachment 1



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Western Plant Health
Association

Western States Petroleum
Association

PRINCIPLES

The members of the Green Chemistry Alliance (GCA) hold that regulations promulgated by the Department of Toxic Substances Control for the purpose of implementing the Green Chemistry legislation of 2008 (AB-1879 and SB 509) conform to the following:

- Promote safe and sustainable products through the application of sound scientific methods of review;
- Avoid duplicative and conflicting regulatory and reporting requirements;
- Ensure protection of Confidential Business Information (CBI);
- Use a systematic approach in which chemicals, their uses, and potential alternatives are first prioritized based on hazard and exposure;
- Ensure balanced consideration of the unique applications, intended function, performance, and useful life of the product in question as well as other lifecycle factors required by statute;
- Impose only cost-effective, sustainable, technologically and commercially feasible requirements; and
- The implementation of such regulation should minimize compliance costs and administrative burdens, and protect California jobs and consumers.
- Support a transparent process in accordance with the California Administrative Procedures Act

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Attachment 2

The Green Chemistry Alliance regulatory proposal consists of the following sections:

- ❖ **Definitions:** Careful consideration was given in crafting definitions to ensure that data used in identifying chemicals of concern and safer alternatives is based on sound science from reliable studies and authoritative bodies. The definitions provided in the GCA regulatory proposal refer to terms within AB 1879 (Feuer, 2008). GCA does not propose to alter the definition of *consumer product* as defined in SB 509. Nevertheless, a definition of *consumer product* which includes with few exception every chemical item which is brought, sold, or leased within California (from the largest building structure to the smallest consumer retail item) begs for focus and direction. Through definitions of *consumer*, *person*, and *product* GCA's proposal seeks to provide the necessary focus which will subsequently lead to the identification and prioritization of the highest risk uses of chemicals of concern in consumer products.
- ❖ **Identification of Chemicals for Consideration:** The initial screening of a chemical will determine if it exhibits one or more of the following characteristics. Is the material: carcinogenic, mutagenic, developmentally and reproductively harmful, and/or persistent, bioaccumulative and toxic (CMR/PB&T)? If so, the chemical would be identified as a *chemical for consideration* and subject to further review. The proposal also stipulates that the department (DTSC) can identify the chemical as a *chemical for consideration* if one or more authoritative bodies, as defined, find the chemical meets the CMR/PB&T criteria. Opportunity is also provided for reconsideration based on new data.
- ❖ **Identification and Prioritization of Chemicals of Concern:** Once identified as a *chemical for consideration* the chemical undergoes additional evaluation based on the severity of the risks associated with the chemical prior to identifying the chemical as a *chemical of concern*. During this evaluation consideration will be given to the chemical's hazard exposure, volume in commerce in California, potential effects on sensitive subpopulations, and the potential for adverse impacts on the environment. The department will prioritize chemicals into high, medium, or low categories from which the high category shall be identified as *chemicals of concern*. *Chemicals of concern* designations may be revised periodically by the department as new data from authoritative bodies are published. A notice and comment opportunity is provided prior to a material being formally identified as a *chemical of concern*.
- ❖ **Evaluation of Consumer Products Containing Chemicals of Concern:** Upon identifying chemicals as *chemicals of concern*, the department (DTSC) will evaluate consumer products containing these chemicals, taking into consideration data from various authoritative bodies and industry trade associations or industry consortia. The consumer products containing *chemicals of concern* will be evaluated based upon the volume of the product for sale in California; the concentration of the *chemical of concern in the consumer product*; the use of the consumer product by sensitive subpopulations; potential for exposure; design features and handling recommendations for the consumer product; and environmental impacts from releases and exposures of the chemical of concern in the consumer products. Official notice and comment opportunity is provided prior to assigning high, medium, and low priorities for the uses of *chemicals of concern in consumer products*. The department will subsequently publish a list of high priority uses of chemicals of concern in consumer products to which the department may thereafter apply the alternatives analysis.

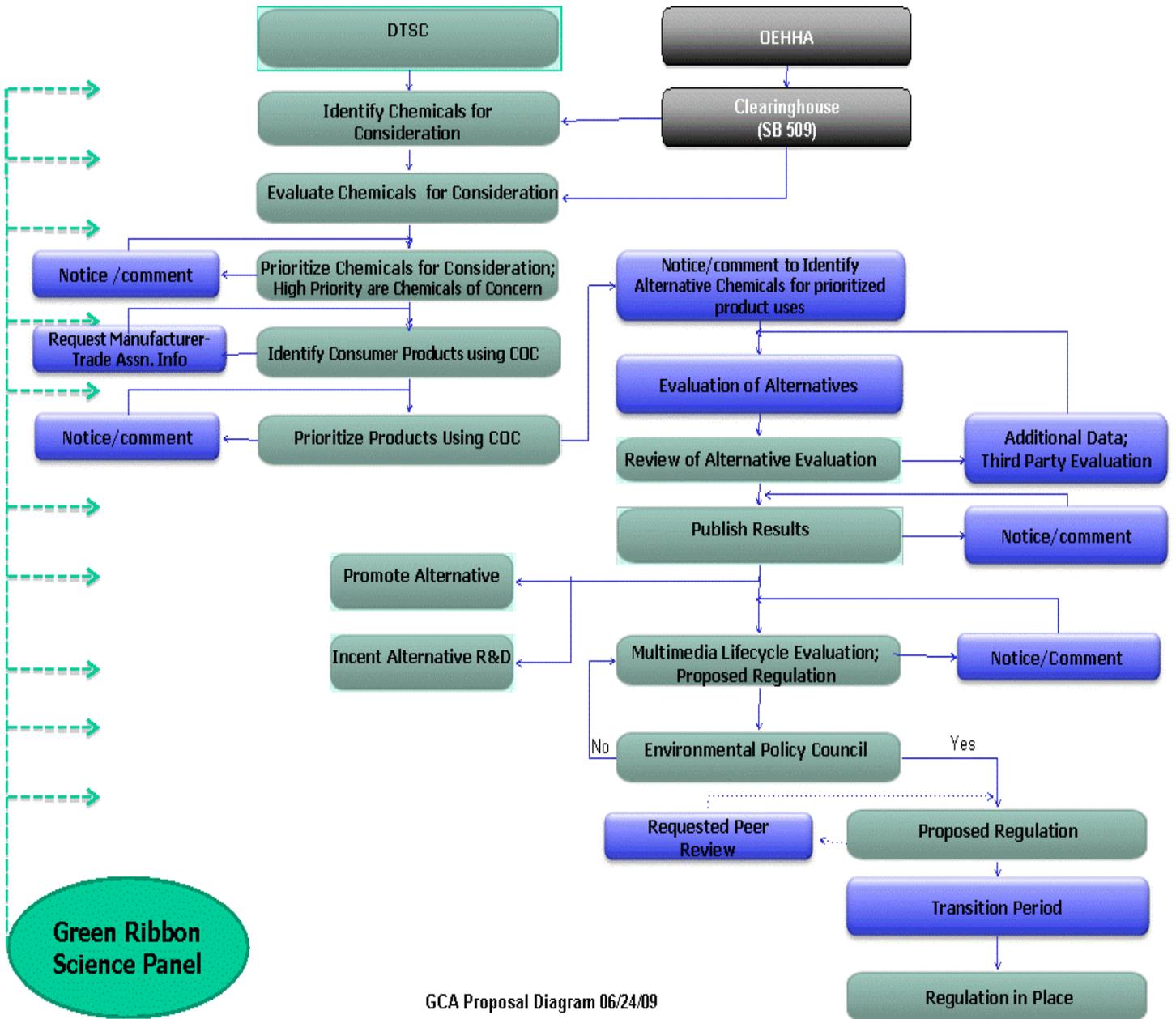
Attachment 2

(Continued)

- ❖ **Alternatives Assessment:** This framework provides for public engagement relative to identifying alternatives to a particular *use of a chemical of concern in a consumer product*. Under the GCA proposal, it is incumbent upon the stakeholders suggesting alternatives to conduct the alternatives assessment on the basis of guidance materials developed by the department. The proposal provides the option for manufacturers to conduct an assessment of the chemical in question compared to the proposed alternative, with the information being provided to the department under the confidential business information protections afforded by the legislation. Under the assessment framework, the proposed alternative(s) will be evaluated based on performance, environmental impacts; health and safety impacts, and economic impacts and feasibility. The department is then required to assess the evaluation and may request third party independent review. In a manner to be prescribed, the associated costs of the third party review would be recoverable by the department. Notice and comment opportunity is provided relative to decisions stemming from the alternatives evaluation(s). Also included are incentive and partnership opportunities relative to alternatives or the lack thereof.
- ❖ **Multi-Media Analysis:** Pursuant to the GCA proposal, a decision by the department to restrict or prohibit the *use of a chemical of concern in a consumer product*, must be supported by a multimedia life cycle evaluation based on scientific data that addresses air, water, end-of-life, worker safety, and other environmental impacts. Notice and comment opportunity is provided relative to decisions stemming from the multimedia evaluation. Upon the completion of the department's evaluation and the public comment opportunity, the evaluation would be submitted to the Environmental Policy Council for review prior to taking official action on the chemical of concern in a consumer product.
- ❖ **Regulatory Enforcement Provisions:** AB 1879 (Feuer, 2008) identifies a range of possible enforcement actions. The GCA proposal provides opportunity to employ control measures to significantly mitigate the adverse impacts from the use of a chemical of concern in a consumer product. The proposal also provides a transition period; and prohibition against a universal ban of all uses of a chemical of concern. In the case of significant regulatory action as specified, the GCA proposal calls for the department to adopt a regulation and to provide the basis for the specified regulatory actions. The proposal also provides an opportunity for an external scientific peer review prior to final adoption a proposed regulation of the use of a chemical of concern in a consumer product. The entire cost of the peer review would be borne by the requesting party.

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Figure 1





PROPOSAL FOR THE IMPLEMENTING AB 1879 (FEUER, 2008)

Section 1. Definitions.

For purposes of this article, the following definitions shall apply:

(a) "Authoritative body" [1] means a government agency or formalized scientific organization that satisfies all of the following requirements:

1. It characterizes chemicals pursuant to an open, deliberative and transparent scientific process in which stakeholders are able to participate formally, communicating directly with the authoritative body through written and oral comments.
2. It is widely perceived to be objective, scientifically based, and does not engage in advocacy.
3. It bases its characterization of chemicals on a weight-of-evidence approach. To the extent available, it considers multiple reliable studies, conducted by different laboratories, at different times, and involving not only different strains but different species and gives full consideration to mode of action, confounding factors, maternal toxicity, historical controls and any other scientific information that may be relevant to understanding the potential effects of chemicals on health and the environment.
4. It publishes its characterizations of chemicals through governmental regulations, periodic reports, monographs or similar publications.

(b) "Chemical of concern" means a chemical designated as such according to section 3(d).

(c) "Chemical for consideration" means a chemical designated as such pursuant to section 2.

[1] IARC – <http://monographs.iarc.fr/ENG/Classification/index.php>
EU Annex VI, part 3 of Regulation (EC) 1272/2008 – http://ec.europa.eu/enterprise/reach/ghs/legislation/index_en.htm
California Proposition 65 – <http://www.oehha.ca.gov/prop65.html>
National Toxicology Program, Biennial Report on Carcinogens – <http://ntp.niehs.nih.gov/?objectid=72016262-BDB7-CEBA-FA60E922B18C2540>
National Toxicology Program, Center for Evaluation of Risks to Human Reproduction – <http://cerhr.niehs.nih.gov/index.html>
Canada DSL Categorization and Screening – http://www.chemicalsubstanceschimiques.gc.ca/categor/index_e.html

(d) "Chemicals that cause cancer in humans" means chemicals that have been classified in (i) the International Agency for Research on Cancer ("IARC") category 1, 2a or (ii) an equivalent category in a similar classification system promulgated by another authoritative body such as US EPA, California Proposition 65, the National Toxicology Program Report on Carcinogens, or the European Union.

(e) "Chemicals that cause mutagenic effects in humans" means chemicals classified in (i) the European Union Category 1A or 1B under Annex VI, part 3 of Regulation (EC) 1272/2008 or (ii) an equivalent category in a similar classification system promulgated by another authoritative body.

(f) "Chemicals that are persistent in the environment, bioaccumulate and are toxic [2]" means chemicals that meet all of the following standards.

1. Persistent in the environment means the chemical has a half-life, as measured by reliable studies, equal to or greater than 180 days in water, or 180 days in soil, or 180 days in sediment, or 2 days in air.
2. Bioaccumulate means the chemical has a bioaccumulation factor (BAF) or bioconcentration factor (BAF), as measured by reliable studies, greater than 5000.
3. Toxic means a chemical has, as measured by repeat dose studies for mammalian toxicity or by acute or chronic studies for aquatic organisms, a subchronic oral value less than or equal to 10 mg/kg-bw/day for mammals; or, LC50 or EC50 less than or equal to 1.0 mg/L (for acute toxicity) or a No Observed Effect Concentration (NOEC) less than or equal to 0.1 mg/L (for chronic toxicity) for aquatic species.

(g) "Chemicals that cause reproductive harm" means chemicals that have been classified as reproductive or developmental toxicants by an authoritative body such as US EPA, California Proposition 65, the National Toxicology Program Center for Evaluation of Risks to Human Reproduction, or the European Union.

(h) "Clearinghouse" means the Toxics Information Clearinghouse established pursuant to Section 25256.

[2] Stockholm POPs – <http://chm.pops.int/>

US EPA EPCRA 313 PBT Rule – <http://www.epa.gov/tri/lawsandregs/pbt/pbtrule.htm>

US EPA Sustainable Futures/P2 Framework Program and Interpretive Guidance – <http://www.epa.gov/oppt/sf/>

Canadian DSL Categorization Criteria for PBT – http://www.ec.gc.ca/substances/ese/eng/dsl/cat_criteria_process.cfm

Canadian DSL Categorization Criteria for Human Health – <http://www.hc-sc.gc.ca/ewh-semt/contaminants/existsub/categor/approach/approche-eng.php>

(i) "Consumer" means a person who used, bought, or leased for use a consumer product. The consumer of a consumer product is not the manufacturer, distributor, reseller, or retailer of a consumer product.

(j) "Consumer product"[3] means a product or part of the product that is used, brought, or leased for use by a person for any purpose. "Consumer product" does not include any of the following:

1. A dangerous drug or dangerous device as defined in Section 4022 of the Business of Professions Code.
2. Dental restorative materials as defined in subdivision (b) of Section 1648.20 of the Business and Professions Code.
3. A device as defined in Section 4023 of the Business of Professions Code.
4. A food as defined in subdivision (a) of the Health and Safety Code Section 109935.
5. The packaging associated with any of the items specified in subparagraph (1), (2), or (3).
6. A pesticide as defined in Section 12753 of the Food and Agricultural Code or the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. Sec. 136 and following).
7. Mercury-containing lights defined as mercury-containing lamps, bulbs, tubes, or other electric devices that provide functional illumination.

(k) "Council" means the California Environmental Policy Council established pursuant to subdivision (b) of Section 71017 of the Public Resources Code.

(l) "De minimis"[4] means the concentration of the chemical is less than 0.1% by weight in the consumer product.

(m) "Department" means the Department of Toxic Substances Control.

(n) "Independent third party" means any party designated by the department pursuant to section 5 (e) for purposes of evaluating potential alternatives to a use of a chemical of concern in a consumer product characterized as a high priority. It is widely perceived to be objective, scientifically based, and does not engage in advocacy.

[3] SB 509 [Simitian, 2008], HSC 25256

[4] REACH Article 7

(n) "Independent third party" means any party designated by the department pursuant to section 5 (e) for purposes of evaluating potential alternatives to a use of a chemical of concern in a consumer product characterized as a high priority. It is widely perceived to be objective, scientifically based, and does not engage in advocacy.

(o) "Multimedia life cycle evaluation" [5] means the identification and evaluation of any significant adverse impacts on public health or the environment, including air, water, or soil, that may result from the production, use, or disposal of a consumer product or consumer product ingredient.

(p) "Office" means Office of Environmental Health Hazard Assessment.

(q) "Panel" means the Green Ribbon Science Panel established pursuant to Section 25254.

(r) "Person"[6] means any person, firm, association, organization, partnership, business trust, corporation, limited liability company, or company and also includes any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law.

(s) "Product" does not include raw materials, feedstock, intermediates, byproducts, permitted releases, or processing aids. A product acquired for resale is not a consumer product.

(t) "Reliable studies"[7] are studies or data generated according to valid accepted testing guidelines in which the test parameters documented are based on a specific testing guidelines or in which all parameters described are comparable to a guideline method. Where such studies or data are not available, the results from accepted models and *quantitative structure activity relationship* ("QSAR") approaches validated in keeping with OECD principles of validation for regulatory purposes, may be considered. Those studies or data which cannot be subsumed under a testing guideline, but which are nevertheless well documented and scientifically acceptable may also be considered reliable studies. The methodology used by the Organization for Economic Cooperation and Development (OECD) in their *Manual for Investigation of HPV Chemicals* (OECD Secretariat, July 2007) will be acceptable for the determination of reliable studies as well as methods used in the U.S. EPA's High Production Volume Challenge Program.

[5] AB 1879 [Feuer, 2008], HSC 25252.5

[6] Derived from HSC 7150.10

[7] Reliable Studies, OECD Manual for In http://www.oecd.org/document/7/0,2340,en_2649_34379_1947463_1_1_1_1.00.html

(u) "Sensitive subpopulations" means subgroups of the general population, including, but not limited to, infants, children, pregnant women, the elderly, and individuals with a history of serious illness that comprise a meaningful portion of the general population and are identifiable as being more susceptible to adverse health effects than the general population.

(v) "Weight-of-evidence approach" means a transparent, criteria-based, methodological evaluation to review and interpret all available and relevant scientific research for a given issue.

Section 2. Chemicals for Consideration.

(a) The department shall compile a list of chemicals for consideration as chemicals of concern for which reliable studies conducted in accordance with good laboratory practices or data from accepted and validated models demonstrate that a chemical meets at least one of the following five criteria:

1. The chemical causes cancer in humans.
2. The chemical causes mutagenic effects in humans.
3. The chemical causes developmental harm in humans.
4. The chemical causes reproductive harm in humans.
5. The chemical is persistent in the environment, bioaccumulates and is toxic.

(b) In preparing the list required by subdivision (a), the department may include chemicals identified as meeting these criteria by one or more authoritative bodies. The department may periodically review chemicals identified by authoritative bodies and determine whether these chemicals should be evaluated as possible chemicals for consideration.

Section 3. Chemicals of concern.

(a) The department shall evaluate the chemicals on the list of chemicals for consideration for possible listing as a chemical of concern. The department may request information from the chemical manufacturer in making its determination which the department shall protect as confidential business information to the extent requested by the manufacturer. The department shall make its determination of chemicals of concern by taking into account the following factors:

1. The severity of the hazard property of the chemical in meeting the criteria under subsection (a), such as a Category 1 is more severe than

a Category 2 mutagen and higher Persistence and Bioaccumulation values are more severe than lower values, and like considerations designed to indicate levels of severity;

2. The number of criteria under subdivision (a) of Section 2 that the chemical meets;
3. The production volume of the chemical in California produced annually, or if statistics are unavailable for California, the national volume of the chemical produced annually;
4. Whether the chemical is intentionally added and has a functional purpose in a consumer product versus an impurity or contaminant present in the consumer product at a de minimis level. Chemicals that are not intentionally added and have no functional purpose shall be excluded from the department's determination;
5. Whether the chemical satisfies one or more of the following factors:
 - A. The intended use of the consumer product containing the chemical results in repeated and substantial exposure to the chemical to sensitive subpopulations in California through a plausible pathway, such as ingestion, dermal, or inhalation exposures;
 - B. The chemical used in the consumer product has been shown to be present in humans through biomonitoring performed by the federal Centers for Disease Control; the California Environmental Contaminant Biomonitoring Program, or other biomonitoring, or environmental monitoring program, performed by an authoritative body, provided the levels of the chemical detected in any one of the programs set forth above are determined by reliable studies to pose or potentially pose a significant risk to public health.
 - C. The use of the chemical of concern in consumer products that results in a release of a chemical of concern in an amount that results in significant adverse impacts to the environment in California.

(b) The department shall prioritize chemicals for consideration with the factors set out in subdivision (a) above based on a qualitative weight of evidence approach into "high", "medium" and "low" priority. Greater weight shall be given to human toxicity characteristics as compared to persistence and bioaccumulation; chemicals that elicit toxic effects at lower doses or have greater carcinogenic potency; chemicals found in consumer products sold at retail; and,

chemicals that are intentionally added ingredients in consumer products that have the greatest potential for exposure to sensitive subpopulations.

(c) The department shall provide at least 45 days notice by publishing in the California Regulatory Notice Register the chemicals for consideration it proposes as high, medium and low priority and shall provide in a detailed statement the specific factors set out in subdivision (a) that the department relied on in making its priority decisions. The department shall also make the list and proposed priorities available on its website. Interested parties may submit written comments during the notice period. The comments may address the factors cited by the department as the basis for assigning a high, medium or low priority to a specific chemical. The department shall give good faith consideration and respond to all comments within a reasonable time.

(d) The department shall reconsider its decision to assign a priority to a specific chemical on the basis of an application supported by reliable studies and submitted by an interested party. The department shall provide at least 45 days notice of the application for reconsideration by publishing it in the California regulatory Notice Register. The department shall also make the application and the scientific support for the application available on its website. During the notice period, interested parties may submit comments in support of or in opposition to the application, relying on reliable studies. The department shall give good faith consideration to the written comments submitted, may obtain additional information or analysis to more fully inform its decision to assign a priority to a specific chemical and shall respond to all comments within a reasonable time.

(e) A chemical on the list for consideration assigned a "high" priority shall be considered a "chemical of concern."

(f) DTSC shall make information obtained pursuant to the above available to the Division of Occupational Safety and Health for purposes of providing for its consideration in matters relating to workplace exposure to the chemicals of concern.

(g) If insufficient data exists for a specific chemical to characterize its hazard adequately, the Department may require the chemical manufacturer to provide additional information about the chemical pursuant to Health and Safety Code section 57019, provided the Department's data needs analysis follows tiered testing procedures as used in US EPA regulatory programs and considers animal welfare interests in finding other options to testing on animals wherever possible.

Citations:

US EPA Pesticide Regulatory Requirements, 2007

US EPA Antimicrobial Data Requirements, 40CFR Part 158

Section 4. Evaluation of Consumer Products Containing Chemicals of Concern.

(a) The department may evaluate consumer products intentionally using chemicals of concern for purposes of taking the actions set forth in Sections 5 and 7.

1. In identifying consumer products using chemicals of concern, the department may consider all of the following:
 - A. The U.S. Environmental Protection Agency's ("EPA's") Inventory Update Report ("IUR") database to determine an initial list of product categories with reported uses of a chemical of concern and also information on whether there are reported uses of the chemical of concern in products intended for sensitive subpopulations.
 - B. The National Library of Medicine's Hazardous Substances Data Bank, the Chemical and Economics Handbook, trade association databases, chemical manufacturer and distributor sales literature, and consumer product manufacturer ingredient information.
 - C. Information provided, pursuant to Health & Safety Code Section 57109, in which product manufacturers indicate whether a chemical of concern is used in any of the manufacturer's products. Information provided shall be treated as confidential business information pursuant to Health and Safety Code section 25257 to the extent requested by the manufacturer.
 - D. Trade associations or consortia of manufacturers that provide aggregated data which indicates whether a chemical of concern is used in any of the associations' or consortia's' member manufacturer's products. Information provided shall be treated as confidential business information pursuant to Health and Safety Code section 25257 to the extent requested by the producer of the information.
2. The department shall consider all of the following factors using a weight-of-evidence approach to determine which uses of chemicals of concern in consumer products are of low, medium, or high priority:
 - A. The estimated volume of sales of the consumer product in California or if statistics are unavailable for California, the national volume of sales of the consumer product produced annually;

- B. The concentration of the chemical of concern in the consumer product is de minimis and is not intentionally added to serve a functional purpose in the consumer product;
 - C. The probable route of human exposure to the chemical of concern in the consumer product that may result from reasonable and intended uses of the consumer product;
 - D. The use of the consumer product resulting in exposure to sensitive subpopulations;
 - E. The consumer product design features that eliminate or significantly minimize exposure to the chemical of concern in the consumer product;
 - F. Whether use of protective equipment or other mitigation measures are recommended to the consumer when using the consumer product;
 - G. The probable releases and exposure to the environment of the chemical of concern in the consumer product; and
 - H. Whether environmental releases of the chemical of concern have an adverse impact on water quality or air quality.
3. The department may also request, pursuant to Health and Safety Code section 57019, that consumer product manufacturers provide information regarding the characteristics listed under paragraph 2 of subdivision (a). Information provided shall be treated as confidential business information at the request of the provider pursuant to Health and Safety Code section 25257.
 4. The department may also request trade associations or consortia of manufacturers to provide data for the characteristics listed under paragraph 2 of subdivision (a). Information provided shall be treated as confidential business information at the request of the provider pursuant to Health and Safety Code section 25257.

(b) The department shall provide at least 45 days notice by publishing in the California Regulatory Notice Register the list of uses of the chemicals of concern in consumer products it proposes to assign as high, medium and low priority, and shall set out in a detailed statement the specific factors that the department relied on in making its priority decision. The department shall make the list of uses and the factors considered available on its website. Interested parties may submit written comments during the notice period. The comments may address the

factors cited by the department as the basis for assigning a priority to a specific consumer product. The department shall give good faith consideration and respond to all comments within a reasonable time.

(c) Following the notice period and after the department responds to comments, the department shall publish its list of high priority uses of chemicals of concern in consumer products to which the department may thereafter apply the alternatives analysis set forth in section 5, and the regulatory enforcement options set forth in section 7.

(d) The department shall reconsider its decision to include or omit a specific use of a chemical of concern in a consumer product on the list of high priority uses of chemicals of concern in a consumer product on the basis of an application submitted by an interested party and supported by reliable studies. The department shall provide at least 45 days notice of the application for reconsideration by publishing it in the California Regulatory Notice Register. The department shall make the application and scientific support for the application available on its website. During the notice period, interested parties may submit comments in support of or in opposition to the application for reconsideration, basing its comment on reliable studies. The department shall give good faith consideration to the comments, may obtain additional information or analysis to inform fully its decision on the application for reconsideration and shall respond to all comments within a reasonable time.

(e) The department shall not designate a use of a chemical of concern as a high priority if the use is already regulated by another agency to address the same characteristics that would otherwise result in designation of that use as a high priority pursuant to this section.

Section 5. Alternatives Assessment.

(a) To identify potential alternatives to the use of a chemical of concern in a consumer product characterized as a high priority, the department shall publish a notice in the California Regulatory Notice Register that it is soliciting alternatives to a particular use of a chemical of concern in that consumer product. The notice shall provide that alternatives may include drop-in chemical substitutes, material substitutes, changes to manufacturing operations, changes to component/product design, or other technological solutions. Interested parties shall submit proposed alternatives within the time period set by the department in the notice.

(b) Persons proposing an alternative shall provide information on all of the criteria set forth in (c) with respect to the alternative proposed in comparison to the use of the chemical of concern in the consumer product under consideration. The department may prepare a guidance document to assist in the evaluation of

viable alternatives that satisfy the requirements of this section. The information provided in this section shall be treated as confidential business information pursuant to Health and Safety Code Section 25257 to the extent requested by the producer of the information.

(c) An evaluation of alternatives to the use of a chemical of concern in a consumer product shall be conducted taking into account the following factors:

1. Performance -- Does the proposed alternative meet the performance requirements and benefits of the use of the chemical of concern in the consumer product under review? These also include but are not limited to useful life, durability, materials and resource consumption, production, in-use and transportation energy inputs and energy efficiency.
2. Environmental Impact -- Does the alternative persist and bio-accumulate and is it toxic? Has the alternative been identified as meeting these criteria by one or more authoritative bodies? What impact does the alternative have on the environment from production or extraction through disposal in terms of water use, water pollution, air emissions, energy use involved in production or extraction, production, transportation, and use, greenhouse gas emissions from production or extraction through end of life? Does it have significantly less impact on the environment than the use of the chemical of concern in the current product? What are the benefits to the environment of the chemical of concern in the consumer product? An exposure assessment of the use of the chemical of concern and proposed alternatives shall be prepared regarding impacts to the environment under this paragraph.
3. Health and Safety Impact -- Does the alternative cause cancer, mutagenic effects, developmental harm, or reproductive harm? Has the alternative been identified as meeting these criteria by one or more authoritative bodies? Is it significantly less toxic to human health and safety than the use of the chemical of concern in the current product? Does the alternative have any adverse impacts to sensitive subpopulations, including infants and children? What are the benefits to the public health and safety of the chemical of concern in the consumer product? An exposure assessment of the use of the chemical of concern and proposed alternatives shall be prepared regarding impacts to public health under this paragraph.
4. Economic Impact and Feasibility -- Is the alternative commercially available in the volumes needed to address the use of a chemical of concern in the current consumer product? Is the cost of the alternative the same or less than the chemical of concern used in the current consumer product? Is the cost the same or less, taking into account

the production or extraction of the raw materials, processing, storage, handling, use, and disposal of the alternative? What economic impacts are likely to occur to the state, the country and globally from the use of the alternative in place of the consumer product or the chemical of concern in the consumer product under review? Are there any pending or existing restrictions on the use of the alternative that might affect the ability of an industry to market its products internationally?

5. Other -- What other criteria does the alternative possess that may render it superior or inferior to the use of the chemical of concern in the consumer product under review?

(d) The manufacturer of the consumer product under review, associated trade association or similar entity, may conduct an evaluation of the alternatives in comparison to the use of the chemical of concern in a consumer product, pursuant to subdivision (c). If the manufacturer, trade association or similar entity chooses to conduct such an alternatives evaluation it shall submit the evaluation to the department according to the schedule set forth by the department and the department shall consider the evaluation as confidential business information pursuant to Health and Safety Code Section 25257, to the extent requested by the producer of the information.

(e) The department shall assess whether the evaluation is adequate for the purposes of this Act. If the department determines the evaluation is not adequate, the department may request additional data.

(f) In the absence of an evaluation by the manufacturer, trade association, or similar entity, the department shall conduct its own evaluation or commission an independent third party evaluation. In a manner to be prescribed, the associated costs of the third party review may be recoverable by the department from the manufacturers or importers of the subject materials under review pursuant to subdivision (a). Other parties independently submitting potential alternatives pursuant to subdivision (a) will be solely responsible for the department's recoverable costs associated with the third party review of their proposed alternatives.

(g) In designating an independent third party pursuant to subdivision (e), the department shall consult with affected chemical and product manufacturers and other interested parties to identify entities with the capabilities and expertise necessary to adequately and objectively evaluate potential alternatives to the use of a chemical of concern in a consumer product according to the criteria established in subdivision (c).

(h) The department shall provide at least 45 days notice by publishing the results of its alternatives review in the California Regulatory Notice Register. The

department shall also make the results of its review available on its website. During the notice period, interested parties may submit comments. The department shall give good faith consideration and respond to all comments within a reasonable time.

(i) The department shall reconsider the results of its alternatives review on the basis of an application submitted by an interested party. The department shall provide at least 45 days notice of the application for reconsideration by publishing it in the California Regulatory Notice Register. The department shall make the application and the basis for its review available on its website. During the notice period, interested parties may submit comments in support of or in opposition to the application for reconsideration. The department shall give good faith consideration to the comments, may obtain additional information or analysis to inform fully its decision on the application for reconsideration and shall respond to all comments within a reasonable time.

(j) After the completion of the alternatives analysis conducted pursuant to section 5, the department may promote the use of alternatives to chemicals of concern in consumer products characterized as a high priority in any of the following ways:

1. Disseminate information about the outcome of the alternatives analysis.
2. Provide incentives to a company selecting the alternative.
3. Encourage other state agencies to make purchases of the alternative.

(k) When the department determines that no feasible alternatives exist to a chemical of concern in a specific consumer product category, the Department may take the following actions:

1. Establish voluntary public-private partnership programs to research alternative chemicals.
2. Provide incentives for the development of commercially viable alternatives for a chemical of concern in a consumer product category.
3. Provide grants to researchers for development of alternatives.

(l) Absent extraordinary circumstances, such as a major scientific breakthrough, alternatives analysis for a use of a chemical of concern in a consumer product may be conducted no sooner than five years after the last alternatives evaluation for a uses-of a chemical of concern in a particular consumer product.

Section 6. Multimedia Life Cycle Evaluation

(a) Except as provided in subdivision (g), the department, in proposing a regulation restricting or prohibiting the use of a chemical of concern in a consumer product characterized as a high priority pursuant to Section 7, either based on known alternatives identified and evaluated pursuant to section 5 or in the absence of known alternatives, shall prepare a multimedia life cycle evaluation conducted by affected agencies and coordinated by the department, and shall submit each proposed regulation and multimedia life cycle evaluation to the council for review.

(b) The multimedia life cycle evaluation shall be based on the best available scientific data, written comments submitted by interested persons, and information collected by the department in preparation for adopting the regulation, and shall address, but is not limited to, impacts associated with all of the following:

1. Emissions of air pollutants, including ozone forming compounds, particulate matter, toxic air contaminants, and greenhouse gases.
2. Contamination of surface water, groundwater, and soil.
3. Disposal or use of the byproducts and waste materials.
4. Worker safety and impacts to public health.
5. Other anticipated impacts to the environment.

(c) Prior to providing formal notice of a proposed regulation in accordance with subdivision (e) of section 7, the department shall publish in the California Regulatory Notice Register notice that it is submitting to the council a regulation described in subdivision (a) of this section and a multimedia life cycle evaluation for review. The department shall also make the draft regulation and multimedia life cycle evaluation available on its website. Interested parties may submit written comments to the multimedia life cycle evaluation during its review by the council. The department shall make the written comments available to the council and shall consider the comments in revising the draft regulation. The department shall maintain for public inspection a record of any relevant materials submitted from any state agency and any written public comments received during the multimedia life cycle evaluation.

(d) The council shall complete its review of the multimedia life cycle evaluation within 90 calendar days following notice from the department that it intends to adopt regulations. If the council determines that the proposed regulation will cause a significant adverse impact on the public health or the environment, or that alternatives exist that would be less adverse, the council shall recommend

alternative measures that the department or other state agencies may take to reduce the significant adverse impact on public health or the environment. The council shall make all information relating to its review available to the public.

(e) Within 60 days of receiving notification from the council of a determination of significant adverse impact, the department shall adopt revisions to the proposed regulation to avoid or reduce the adverse impact, or the affected agencies shall take appropriate action that will, to the extent feasible, mitigate the adverse impact so that, on balance, there is no significant adverse impact on public health or the environment.

(f) In coordinating a multimedia life cycle evaluation pursuant to subdivision (a), the department shall consult with other boards and departments within the California Environmental Protection Agency, the State Department of Public Health, the State and Consumer Services Agency, the Department of Homeland Security, the Department of Industrial Relations, and other state agencies with responsibility for, or expertise regarding, impacts that could result from the production, use, or disposal of consumer products and the ingredients they may contain.

(g) Notwithstanding subdivision (a), the department may adopt a regulation pursuant to Section 7 restricting or prohibiting the use of a chemical of concern in a consumer product characterized as a high priority either based on known alternatives identified and evaluated pursuant to Section 5 or in the absence of known alternatives, without subjecting the proposed regulation to a multimedia life cycle evaluation if the council, following an initial evaluation of the proposed regulation, conclusively determines that the regulation will not have any significant adverse impact on public health or the environment.

Section 7. Regulatory Enforcement Provisions

(a) Following the completion of an alternatives analysis as described in Section 5 and any multimedia life cycle evaluation required by Section 6, the department, acting pursuant to Government Code section 11340 et seq., with the exception of the provisions of paragraphs 1 and 2, may propose one or more of the following alternative enforcement requirements by regulation as necessary to mitigate the adverse environmental or public health impacts, or both, associated with a chemical of concern in a consumer product designated as a high priority pursuant to section 4:

1. Not requiring any action.
2. Imposing requirements to provide additional information needed to assess the chemical of concern in the consumer product and its potential alternatives.

3. Imposing requirements on the labeling or other type of consumer product information not conflicting with those of the Federal Government or other State agencies.
4. Imposing requirements for the manufacturer of the consumer product to manage the consumer product at the end of its useful life, including recycling or responsible disposal of the consumer product.
5. Imposing requirements that control access to or limit exposure to the chemical of concern in the consumer product.
6. Imposing a restriction on the use of the chemical of concern in the consumer product.
7. Imposing a requirement to fund green chemistry challenge grants where no feasible alternative exists.
8. Prohibiting the use of the chemical of concern in the consumer product.

(b) The department shall not prohibit the use of the chemical of concern in a consumer product, if control measures can be imposed which would significantly mitigate adverse impacts on human health and the environment.

(c) Any action by the department pursuant to subdivision (a) shall include a plan for a transition period, allowing manufacturers to procure alternative materials, change plant equipment and procedures and sell through and replenish existing inventories through the value chain.

(d) The department may not impose a universal prohibition or ban on all uses of a chemical of concern.

(e) The department shall adopt a regulation pursuant to Government Code section 11340 and following as the means for taking enforcement actions pursuant to this section. The department shall set out in its Initial Statement of Reasons the basis for its proposed enforcement action. The proposed action shall address the specific hazard causing the chemical to be characterized as a chemical of concern and the specific use of that chemical of concern that was characterized as a high priority. The department shall make findings, supported by substantial evidence, for the following enforcement actions:

1. To prohibit the use of a chemical of concern in a consumer product, the department shall find that the use poses a high probability of severe, irreversible risk to public health, safety, or to the environment such that urgent action is required; the risk of the use outweighs its benefits; and, none of the actions set out in paragraphs 2 through 7 of

subdivision (a) of this section is sufficient to mitigate the risk to an acceptable level.

2. To restrict the use of, control access, or limit exposure to a chemical of concern in the consumer product, the department shall find that the risk of the use outweighs its benefits under certain circumstances or to certain sensitive subpopulations; that the risk can be mitigated to an acceptable level by the specific restriction; and that none of the actions set out in paragraphs 2 through 4 of subdivision (a) of this section is sufficient to mitigate the risk under those circumstances or to those sensitive subpopulations to an acceptable level.
3. To require the manufacturer of the consumer product to manage the consumer product at the end of its useful life, the department shall find that the product is a unique waste that cannot be more efficiently managed through the existing waste management systems; that users of the product can and will participate in the manufacturer's waste management program easily and efficiently; and that no adverse changes occur in any of the life cycle factors set out in Health and Safety Code section 25253.
4. To require additional labeling on the use of a consumer product, the Department shall find that the risk posed by the specific use can be mitigated to an acceptable level by further directing consumers on how to use the consumer product.
5. To require additional information about the use of a chemical of concern in a consumer product, the Department shall find that the hazard characteristics of the chemical of concern and the exposure profile of the use is more likely than not to pose a significant risk to human health and safety or to the environment, and that the risk has not been adequately characterized.
6. To require the funding of a green chemistry challenge grant, the Department shall find that no feasible alternative has been identified pursuant to the process set out in section 5; that the risk to human health and safety or to the environment posed by the use is significant; and is more likely than not that an alternative to the use can be developed within a reasonable time period and at a reasonable cost, and states the basis for that finding.

(f) Any person may, within 15 calendar days of the date of the public workshop on a proposed regulation of a chemical of concern in a consumer product characterized as a high priority, request the department to submit the proposed regulation, including any related alternatives assessment and multimedia life cycle evaluation, to external scientific peer review prior to its adoption. If the

department receives such a request, the department shall submit the proposed regulation, including any related alternatives assessment and multimedia life cycle evaluation, for review in accordance with subsection (g) if the person requesting the external scientific peer review enters into an enforceable agreement with the department within 15 calendar days of making the request that requires the person requesting the submission for review to fully reimburse the department for all of the costs associated with conducting the external scientific peer review.

(g) Upon entering into an agreement pursuant to subsection (f), the department shall assemble an expert panel to conduct the external scientific peer review. The department shall select individuals with expertise relevant to the potential human health and environmental impacts associated with the use of a chemical of concern in a consumer product characterized as a high priority that is the subject of the proposed regulation, including, but not limited to the pool of applicants to the Green Ribbon Science Advisory Panel. No person may serve as an external scientific peer reviewer if that person participated in the development of the proposed regulation or any related alternatives assessment or multimedia life cycle evaluation.

(h) For any proposed regulation subject to an external scientific peer review pursuant to subsection (f), the department shall not take any action to adopt a final regulation unless all of the following conditions are met:

1. The department submits the proposed regulation, along with a statement of the scientific findings, conclusions, and assumptions on which the proposed regulation is based and the supporting scientific data, studies, and other appropriate materials, to the external scientific peer review panel for its evaluation. Information provided shall be treated as confidential business information at the request of the provider pursuant to Health and Safety Code section 25257.
2. The external scientific peer review panel, within the timeframe agreed upon by the department and the external scientific peer review panel, shall prepare a written report that contains an evaluation of the scientific basis of the proposed regulation. If the external scientific peer review panel finds that the department has failed to demonstrate that the proposed regulation is based upon sound scientific knowledge, methods, and practices, the report shall state that finding, and the reasons explaining the finding, within the agreed-upon timeframe. The department may accept the finding of the external scientific peer review panel, in whole, or in part, and may revise the proposed regulation accordingly. If the department disagrees with any aspect of the finding of the external scientific peer review panel, it shall explain, and include as part of the rulemaking record, its basis for arriving at such a determination in the adoption of the final regulation, including

the reasons why it has determined that the proposed regulation is based on sound scientific knowledge, methods, and practices.

(i) The department shall not regulate any use of a chemical of concern characterized as a high priority if that use is already regulated by another agency to address the same characteristics that would otherwise result in regulation of that use pursuant to this section.

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