

2007

Governor's Task Force to Promote Safer Chemicals in Consumer Products: Interim Report

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Governor John E. Baldacci's
Task Force Promoting Safer
Chemicals in Consumer Products

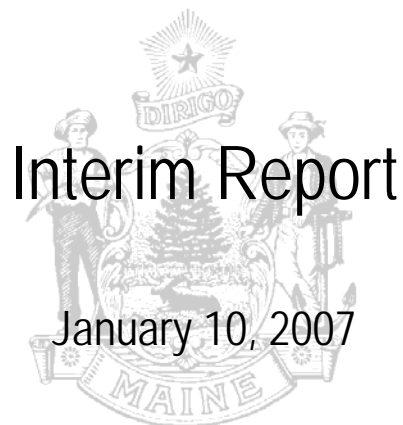


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Executive Summary

The Governor's Task Force Promoting Safer Chemicals in Consumer Products was established to identify and promote the use and development of safer alternatives to hazardous chemicals in consumer goods and services made, provided or sold in Maine so as to benefit public health, the environment and the economy for all Maine people.

The 1976 federal Toxic Substances and Control Act (ToSCA) was intended to provide a framework for federal regulation of chemicals found to present an unreasonable risk of injury to health or the environment and to encourage industry to develop adequate data with respect to the effect of chemical substances and mixtures on health and the environment.

The Task Force Promoting Safer Chemicals in Consumer Products agrees with the U.S. Government Accountability Office (GAO) and others that ToSCA does not provide sufficient chemical safety data for public use by consumers, businesses and workers; is inadequate to ensure the safety of chemicals in commerce in the United States; and fails to create incentives to develop safer alternatives. It further fails to provide health and ecotoxicity information for Maine companies seeking information about the safety of chemicals in their products, and fails to provide information adequate to ensure worker safety.

Under ToSCA, the burden of proof requirements are so heavy that they discourage effective agency action. This means that the Environmental Protection Agency (EPA) cannot stop companies from using many chemicals the agency knows may be or are harmful. EPA's inability to act under ToSCA is a key reason Maine must move to protect its citizens and environment from toxic chemicals in consumer products.

Task Force members Tom's of Maine and Interface, Inc. represent two businesses in Maine that have developed profitable product lines that exemplify safer consumer products. Both Tom's of Maine and Interface, Inc. incorporate safer products, environmental protection and sustainability into their work practices as well as their products. Lack of comprehensive and standardized information on the toxicity and ecotoxicity of most chemicals has presented challenges for both companies.

Maine's agencies are playing a leadership role in promoting the use of safer chemicals in consumer products through the purchase and use of products that are needed in state government, commonly used by consumers and safer for our state workers and the environment. Environmentally preferable procurement is underway for janitorial supplies, lamps and ballast, computers, and wheel weights. An Integrated Pest Management program is under development for state-owned and operated buildings and their grounds in the Augusta area.

Technological innovation is key to both the development of safer alternatives to toxic chemicals and to allowing our companies to maximize the value of Maine's rich natural resource base. Green Chemistry, including the development of bio-based products from Maine agricultural and forest resources, offers the potential for substantial economic growth and job expansion in this state. This innovative technology will supply a demand that already exists from successful

Maine businesses committed to sustainable materials, processes, and products. Becoming preeminent in the field of Green Chemistry is a natural for this state and its businesses. Task Force recommendations support the expanded efforts of the University of Maine System and private industry to become leaders in the field of Green Chemistry and the emerging potential of bio-based products.

The Task Force also recommends actions to improve our knowledge base of safer chemicals among Maine's consumers and student population and to increase opportunities for higher level education in the areas of toxicology and environmental health.

I. Introduction

The Governor's Task Force to Promote Safer Chemicals in Consumer Products was created by Governor John E. Baldacci's Executive Order 12 FY 06/07 dated February 22, 2006. (full text of copy of Executive Order and Amendment to Executive Order is provided as Attachment A). The Task Force was authorized to meet over a 19 month period culminating in the submission of a final report by October 1, 2007. The Task Force is also directed to issue this Interim Report.

The 13 member Task Force includes: the commissioner, Department of Environmental Protection, who chairs the Task Force; the deputy commissioner, Department of Economic and Community Development or designee; the State Toxicologist or designee; an IPM Council Coordinator (a single position shared by the Department of Agriculture IPM Coordinator and the Cooperative Extension IPM Coordinator); three members from the environmental public health community including a representative from the Alliance for a Clean and Healthy Maine, a Maine environmental policy organization and a Maine public health organization; three members of the business community including a representative from a Maine manufacturer that practices environmentally sustainable production, a Maine business association and one other Maine business; one representative from a University in the University of Maine system who is involved in research and development; one representative of a Maine labor organization; and a public member (member roster is provided as Attachment B).

The Task Force was established to identify and promote the use and development of safer alternatives to hazardous chemicals in consumer goods and services made, provided or sold in Maine so as to benefit public health, the environment and the economy for all Maine people. Specifically, the Task Force was charged with the following four duties:

- i. Survey relevant knowledge and activities related to promoting safer alternatives to priority chemicals in the areas of environmental public health policy development, green chemistry research and development, and economic incentives;
- ii. Develop recommendations for a more comprehensive chemicals policy that requires safer substitutes to priority chemicals in consumer products and creates incentives to develop safer alternatives, on a state and regional basis;

- iii. Develop recommendations on expanded consumer education, retailer education and training, supply chain information and public right-to-know in order to promote markets for safer alternatives;
- iv. Develop recommendations for submission to the Maine Science and Technology Advisory Council on expanded research and development of safer alternatives to priority chemicals in consumer products, including investment in green chemistry research and development and the possibility of developing bio-based plastics from Maine-based agricultural and forest products.

This Interim Report will primarily address duties i. and iv. above.

II. Relevant Knowledge and Activities Related to Promoting Safer Alternatives to Priority Chemicals

a. Gaps in the current federal chemical safety system

The Task Force reviewed the current system of federal regulation of chemicals in commerce under the Toxic Substances Control Act (ToSCA), 15 U.S.C. secs. 2601 et seq.¹ This regulatory framework has been described in an environmental law textbook as “perhaps the most complex, confusing, and ineffective of all of our federal environmental protection statutes.”²

ToSCA’s passage in 1976 was intended to provide a framework for federal regulation of chemicals found to present “an unreasonable risk of injury to health or the environment,” and to encourage industry to develop adequate data with “respect to the effect of chemical substances and mixtures on health and the environment.” ToSCA has, however, fallen far short of its objectives.

As further described below, ToSCA creates a “Catch 22”: the EPA has to already *have* data in order to require testing to *develop* data to determine the safety of chemicals. There is no requirement, however, that these data be generated. ToSCA provides penalties against manufacturers for failure to disclose information regarding toxicity, but not for failure to gather it. Very little information exists regarding the toxicity or ecotoxicity of the majority of chemicals in commerce.

With the exception of one class of chemicals (PCB’s) of particular concern at the time ToSCA was enacted, ToSCA does not require the EPA to review the risks of existing chemicals in commerce. The EPA has the discretionary authority to issue “testing orders” to manufacturers, but only after the EPA has met the significant burden of finding “substantial evidence” that the chemical may present an “unreasonable risk.” Over the 30 years since ToSCA was enacted, EPA has issued testing orders for fewer than 200 of the 62,000 chemicals that were in production in 1979. In 1994, the GAO found that the EPA had managed to review the risks of about 1,200 (2%) of the 62,000 “existing chemicals.” The EPA reported, however, that about 16,000 (26%) of these chemicals were potentially of concern on account of their production volume and chemical design.³ This body of 1979 existing chemicals “continues to constitute the great

majority of chemicals in commercial circulation in the U.S. (by volume), many of which have reached high levels of use despite very little information about their toxicity or ecotoxicity.”⁴

While the EPA’s record of reviewing *new* chemicals developed since 1979 is somewhat better, there is similarly no requirement in ToSCA that these new chemicals be tested for safety. ToSCA simply requires that manufacturers submit Pre-market Notifications (PMNs) to the EPA, to which the EPA must normally respond within 90 days. Only half of PMNs submitted under ToSCA contain any toxicity information, and less than 20% include data on long-term toxicity.⁵ The EPA has acknowledged that 85% of PMNs lack data on chemical health effects, and 67% lack health or environmental data.⁶ The “Catch-22” that providing any data suggestive of toxicity issues might lead to an EPA testing order has led some environmental lawyers to conclude that testing one’s new chemical under ToSCA is “like volunteering for an IRS audit. Even where data exist demonstrating the need for regulation of a specific chemical, substantial regulatory hurdles result in few regulatory actions. Understandably, no one does.”⁷ Noting that approximately 2000 new chemicals enter the market each year, the 2006 California Policy Research Center 2006 Framework for Leadership in Chemicals Policy and Innovation report (hereinafter California Report) observed that “[t]he result is an enormous lack of information on the toxicity and ecotoxicity of chemicals in commercial circulation.”⁸

Since ToSCA’s enactment in 1976, the EPA has only taken final regulatory action restricting the use of five chemicals or classes of chemicals (PCBs, CFCs, dioxins, asbestos, and hexavalent chromium), and the EPA has banned no chemical in the last 16 years. The EPA’s regulation of asbestos, promulgated after the agency spent ten years gathering evidence, was overturned by the federal court because the EPA failed to meet its burden of proof under ToSCA.⁹ Unlike other major environmental statutes, regulatory action under ToSCA must be predicated upon an analysis of the economic consequences of the action “after consideration of the effect on the national economy, small business, technological innovation, the environment and public health.” Additionally, before the EPA can ban a chemical, it must conduct a full risk analysis of the costs and benefits of all less burdensome regulatory alternatives, demonstrating that the risk presented by these alternatives is unacceptable; it must also conduct an analysis of the risks of all substitute chemicals for the banned product. These hurdles act as an effective roadblock to most agency action.

This task force concurs with the findings of the California Report that the regulatory inadequacies of ToSCA at the federal level “have created a broad set of problems for public and environmental health, industry, business and government in California.”¹⁰ These problems are summarized into three gaps in the ToSCA regulatory framework: a “Data Gap,” making it “very difficult even for large firms to identify hazardous materials in their supply chains;”

DATA GAP
**Lack of comprehensive and standardized
information on the toxicity and ecotoxicity of
most chemicals**

a “Safety Gap,” meaning that government agencies “do not have the information they need to systematically identify and prioritize chemical hazards, nor the legal tools to efficiently mitigate known hazards;” and a “Technology Gap,” meaning that the lack of both market and regulatory drivers “has dampened motivation on the part of U.S. chemical producers and entrepreneurs to invest in new green chemistry technologies.”

SAFETY GAP
**Government agencies do not have the
information they need to systematically
prioritize chemical hazards nor the legal tools
to efficiently mitigate known hazards**

TECHNOLOGY GAP
**Lack of both market and regulatory drivers to
motivate US chemical producers and
entrepreneurs to develop green chemistry
technologies**

b. Impact on Maine businesses.

The Task Force received information from Tom’s of Maine¹¹, and Interface, Inc¹², both describing the challenges facing Maine companies seeking to ensure the safety of the chemicals in their products. These are primarily due to the “Data Gap” and the “Technology Gap” described above.

Natural personal care is a concept under which products are made without artificial or animal ingredients or chemicals. Tom's of Maine has been at the forefront of this innovation in personal care products since its founding in 1970 in Kennebunk, Maine. The company mission calls for them to be distinctive in products and policies that honor and sustain our natural world. One of the ways Tom's accomplishes this is by following a very strict and explicit set of guidelines related to every aspect of product creation and the production cycle. Tom's calls this set of guidelines their Stewardship Model.

As there are no formal regulations or even guidelines within the industry that represents Tom's Stewardship Model, the company created its own internal "process for assessing vendor total value" (Attachment C) to qualify potential suppliers. The time and cost associated with this added evaluation is a direct result of the "data gap" that exists for companies looking to create effective products from plants and minerals instead of artificial chemicals.

Interface, Inc. is a world-wide manufacturer of modular carpet and fabric for commercial interiors, with 15 manufacturing facilities including 3 facilities located in Maine. The company goal is to become a sustainable business by the year 2020. Twelve years ago, the company began implementation of a chemical management system and has since developed extensive experience in chemical assessment and safer chemical substitutions. In doing so, Interface, Inc. has had first hand experience with the impacts of the chemical "Data Gap". The Material Safety Data Sheet (MSDS) on which companies rely to provide information on the raw materials they purchase are often inaccurate, incomplete, and out of date (see sample MSDS demonstrating these concerns Attachment D). To get information that is not available on the MSDS, the company has to negotiate and implement confidentiality agreements vendor by vendor, before chemical assessments can be completed. As a result, development of safer products takes an extensive amount of time, which translates to labor costs and delays in the introduction of safer products. Furthermore although market drivers are beginning to improve, the research on safer alternatives to the existing chemicals in the marketplace has not kept pace. Therefore, when concerns are identified for certain chemical classes, the company has to invest time and money to conduct its own research to develop safer alternatives.

c. Impact on Maine workers.

The Task Force heard a presentation by Mark Catlin¹³, on chemicals in the workplace that similarly identified problems associated with the "data gap". Mr. Catlin is engaged in training workers throughout the US on hazardous materials issues. Substitution of a safer chemical is the first step in the OSHA hierarchy of responses to workplace toxic chemicals. When there is a lack of available information to identify safer chemicals then less effective controls such as engineering controls and personal protective equipment will need to be used. Of the 500 chemicals that OSHA has identified as of concern in workplaces, it has updated and improved standards for only 30. The remaining standards are those proposed by industry in the mid to late 1960s, based on outdated science from the early to mid 1960s. Mr. Catlin noted that information about the long term chronic toxicity of chemicals in the workplace is significantly lacking in comparison with information about acute toxicity. He indicated that the estimates reported in the California Report regarding the extent of chronic disease in California attributable to workplace exposure¹⁴ are "reasonable," and that such illnesses and deaths are significantly under reported.

d. Current activities in states and Europe related to chemical policy reform and promoting safer alternatives to priority chemicals.

The Task Force heard a presentation by Ken Geiser, PhD, on directions toward new chemical policies.¹⁵

Strategy for chemicals management has evolved from a historic reliance on disposal and dilution, to waste treatment and pollution control requirements, and then adoption of toxics policy (or chemical by chemical regulation). The focus is now on chemical systems and product design. Chemicals policy is defined as management policies by government or corporations that focus on the informed selection and sound use of all chemicals. Chemicals policy is hazard-based rather than exposure-based, meaning that it's driven primarily by the inherent properties of chemicals rather than by estimations of exposure and risk. Chemicals policy is intended to transition chemical use from high hazard substances to lower hazard substances, and to promote research and innovation in chemical markets.¹⁶

With respect to current chemicals policy development in the United States, there is little initiative at the federal level. However, there are discussions underway on chemicals policies in several states including California, Maine, Massachusetts, Michigan and Washington.

From 1989 to 1994, six states passed Toxics Use Reduction Acts (TURA) including Massachusetts, which was the first, and Maine. The Massachusetts law focused on about 190 chemicals and involved more than 1,000 industrial firms. Through mandatory planning requirements, training and technical assistance, the TURA program resulted in significant reductions in toxic chemical use, waste and emissions and helped firms improve efficiencies and save money.¹⁷

The Massachusetts legislature is now working on broader chemicals policy reform that would expand the TURA focus to include safer substitutes for commercial products. A step in this broader chemicals policy reform was a legislative mandate to study alternatives to five high priority chemicals: lead, perchloroethylene ('perc', used in drycleaning), formaldehyde, di(2-ethylhexyl) phthalate (DEHP, a softener added to PVC plastic) and hexavalent chromium. This "Five Chemicals Study" was recently completed. For each chemical, it identifies uses, identifies alternatives, prioritizes alternatives and evaluates alternatives based on performance, cost, health and environment. The report concluded that "[I]n every case, at least one alternative was identified that was commercially available, was likely to meet technical requirements of many users, and was likely to have reduced environmental and occupational health and safety impacts compared with the base chemical."¹⁸

There are several new directions in international chemicals policy, including new European chemicals policies that outpace federal policy action in the United States. The most significant chemicals policy development is the European Union directive known as REACH (for Registration, Evaluation and Authorization of Chemicals).¹⁹

REACH, will to enter into force on June 1, 2007²⁰, and will overhaul European chemicals policy and affect about 30,000 industrial chemicals. Its development over the last six years has been followed closely in the United States since it will affect exports into the European market and

because it models a modern, systems approach to more effective management of all new and existing chemicals. REACH has four major parts:

Pre-Registration. As a preparatory step, within 18 months after passage of REACH, all manufacturers or importers of chemicals in amounts greater than 1 ton per year (about 30,000 substances) must submit simple technical information on their chemicals to the new European Chemicals Agency.

Registration. Chemical producers and importers must formally register their chemicals and submit specific chemical safety data if manufactured or imported at greater than 10 tons per year. The registration process will be phased in over three years, six years and eleven years. This will close the data gap for larger volume chemicals.

Evaluation. This is essentially a compliance and risk screening process. Chemical safety reports will be scrutinized and additional information can be required. If risks are not adequately controlled, then the restrictions process may be used.

Authorization. This is essentially a ban on chemicals of very high concern with exemptions allowed for specific uses. Once a chemical is selected, a date is set when use will be phased-out. Users who wish to continue use (including in products) must apply for authorization. This presumptive ban will apply to known and probable carcinogens, mutagens and reproductive toxins (CMRs 1&2); persistent bioaccumulative and toxic chemicals (PBTs), very persistent and very bioaccumulative chemicals (vPvBs), and substances of equivalent concern.

Under REACH, a new European Chemicals Agency will be established in Helsinki, Finland, to manage the chemicals database, evaluate chemical submissions and conduct assessments in support of authorizations and restrictions. Member states will provide staff experts, handle enforcement and share information.²¹

The other significant international chemicals policy development is the United Nations SAICM – Strategic Approach to International Chemicals Management. The Dubai Declaration signed in February 2006 establishes a network of countries with a commitment to the overall goal “[T]o achieve the sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.” A Global Plan of Action will be developed, with assistance provided to developing countries.

III. Relevant Knowledge on Research and Development of Safer Alternatives to Priority Chemicals in Consumer Products in Maine

Among the primary concerns with the presence of toxic chemicals in consumer products and the environment is the lack of knowledge regarding the toxic properties of the raw materials used in consumer products and the lack of knowledge regarding the eventual degradation products and by-products which may be created in the manufacture of these products. The lack of knowledge comes from the lack, or inadequacy, of evaluation and testing. Additional factors are the lack of an adequate federal chemicals use policy and a regulatory framework to require testing,

environmental fate analysis and safer alternatives analysis for existing and new chemicals. The reduction or elimination of toxic chemicals in consumer products can only be achieved after careful analysis of the raw materials used in these products and the identification of safer substitutes. A new approach to the design and manufacture of safer products incorporating principles of pollution prevention, design for energy efficiency, use of renewable feedstocks, and design for degradation, is referred to as “Green Chemistry”.²²

GREEN CHEMISTRY
design of chemical products and processes that
reduce or eliminate the use and generation of
hazardous substances (Anastas et al. 2000).

Maine is at the cutting edge of this new approach. The University of Maine is a charter member of the New England Green Chemistry Consortium, which consists of the land-grant universities in New England and which hosted the annual meeting of the Consortium in Orono in June 2006. The University of Maine has taken the lead in trying to promote bio-based raw materials from the forest products sector that could be used in the production of safer bio-based products.²³ A recent industry initiative by InterfaceFABRIC, in partnership with the Alliance for a Clean and Healthy Maine and the University of Maine, has expanded the bio-based products effort to look at the potential of using Maine potatoes and other agricultural products to supply the feedstock for bio-based plastics.²⁴ The background for this initiative and a Seed Grant Proposal submitted to the Maine Technology Institute was provided to the Task Force by Stacie Beyer, Corporate Environmental Manager for Interface, Inc.

The bio-based products initiative is being driven by a market demand for less toxic bio-based products and the business effort to respond to new market demand for safer products. There are a significant number of Maine companies interested in using or investigating “Green Chemistry” to identify new less toxic raw materials to use in their products. InterfaceFABRIC has already switched from a petroleum based plastic to a biodegradable, compostable, natural corn based PLA (polylactic acid) for use in the production of some fabrics. The goal of this initiative is to find or help create a source of PLA derived from Maine potatoes or other agricultural products.

Maine has one of the country’s highest levels of research activity by non-profits, but the Research and Development activity by private industry is below average. Innovation (R&D&Commercialization activity) by Maine industry and businesses is critical to Maine’s economic success. One of Maine’s natural niches is utilization of its rich natural resource base. Continuing and expanding the work of the University of Maine and University of Southern Maine in Green Chemistry and toxicology is vital to any potential development of in-state manufacturing of innovative less toxic bio-based products

IV. State of Maine Initiatives: Leadership by Example

Environmentally Preferable Procurement

The practice of environmentally preferable procurement has had a strong history under Maine's State government through its Bureau of General Services, Division of Purchases. For several years green procurement strategies have been utilized for acquiring Energy Star® rated equipment and appliances, paper and printing supplies, highway paint, retreaded tires and numerous other products.

With adoption of an Environmentally Preferable Procurement Policy in 2004 the Division of Purchases pledged “to purchase products and contracts for services that have a reduced negative impact on human health and the natural environment in comparison to other products and service that serve similar purposes.” Under the policy, the Division has undertaken several initiatives in coordination with other agencies. These initiatives include the adoption of Leadership in Energy and Environmental Design standards for Existing buildings (LEED-EB) and new construction, the procurement of “green” lamps and ballasts, the adoption of Electronic Product Environmental Assessment Tool (EPEAT®) standards for acquiring computer related equipment, procurement of lead free wheel weights and green chemical procurement.

Environmentally Preferable Procurement for Janitorial Products

In July of 2005, the Maine Board of Pesticides Control in the Department of Agriculture, in concert with Division of Purchases, the Property Management Division, and the Department of Environmental Protection established an interagency committee to evaluate the purchase and use of “safer” cleaners and disinfectants. The scope of this committee was expanded to include “cradle to grave” product characteristics with the issuance of the Executive Order 12 FY 06/07, *An Order Promoting Safer Chemicals in Consumer Products and Services* to create improved specifications for the procurement of “green” janitorial products. Subsequently the chairmanship shifted to the Bureau of General Services. Additionally, Paragraph 2 of EO 8 FY 04/05 requires that existing state buildings shall incorporate the LEED-EB standards. Section MR, Credit 4 or of the LEED-EB standards requires that cleaners meet the Green Seal GS-37 standard. Thus, guidelines created by the committee are two pronged in their approach to addressing the use of safer chemicals. For cleaners, future products must qualify as meeting the criteria set forth in the Green Seal Environmental Standard for Industrial and Institutional Cleaners GS-37 or must be certified by an independent accredited laboratory as qualifying under GS-37 criteria. Disinfectants must meet the Maine specifications developed using criteria based on the Battelle Pacific Northwest Laboratories standards and the expertise of committee members. One major objective of this program is to identify “safer” products that also work effectively.

To promote environmental and human health and welfare throughout the state, the new “green” janitorial products specifications will allow municipal, county and regional government subdivisions an opportunity to integrate their own purchasing needs into the State’s Request for Quotations (RFQ). Extending this opportunity to other government sectors will create opportunity for expanded environmentally preferable purchasing at all levels of government.

Currently, the Division of Purchases is in the process of issuing a RFQ for the procurement of green chemical products and will be attaching the new specifications for vendors to incorporate into their bids. Ensuring high standards for environmental and occupational health and safety as

well as economic feasibility is of the foremost importance under the new specifications. Interested parties are encouraged to provide feedback on the new specifications, and their comments and suggestions will be considered as implementation of the specifications continues.

In the early 1990's, the Services Employees International Union (national affiliate of the Maine State Employees Association) created a non-profit employee Hazard Materials Awareness Training Program using a small group peer training format. The training continues to occur annually at Maine Department of Transportation and has also been conducted with Bureau of General Services custodial staff. The program has trained more employees in Maine than in any other state for three years running and this exemplary effort has been recognized through awards. At a recent presentation to the Task Force, the SEIU non-profit Hazard Materials Awareness training program offered those services once more to the state to assist with training employees on new janitorial products.

Environmentally Preferable Procurement Lamps and Ballast

The Division of purchases and Department of Environmental Protection are developing a new Electrical Lamps and Ballasts Request for Quotations (RFQ). The intent is to purchase products that in comparison to other products have a reduced impact on human health and the natural environment balancing price, performance, availability and safety.

In order to reduce mercury content the Division of Purchases has incorporated standards developed by the United States Green Building Council's Leadership in Energy and Environmental Design with regard to operation and maintenance of Existing Buildings (LEED-EB). Respondents to the RFQ must document the mercury content of all mercury containing light bulbs included in their bid. Vendors will also provide assistance to building managers to ensure conformance with LEED-EB standards.²⁵

Environmentally Preferable Procurement Lead Free Wheel Weights

Traditional wheel weights for tire balancing have been made primarily of lead. A 2000 study²⁶ indicates that approximately 10% of the weights fall off annually, degrade in the environment and contribute both to levels of lead in storm water runoff that is toxic to some aquatic organisms and to ambient lead dust in the urban environment. U.S. Geological Survey estimates lead in wheel weights lost on US roadways at 2000 tons annually and "because lead wheel weights have been used on vehicles for about 70 years, the cumulative amount of contained lead dispersed may be significant."²⁷

Use of lead wheel weights was banned in the European Union in July 2005. Ann Arbor, Michigan and the State of Minnesota are replacing lead wheel weights with non-lead weights. Since July 2006, pursuant to Governor Baldacci's Executive order existing lead wheel weights on passenger vehicles and light duty trucks serviced in state agency garages in Maine have been replaced with covered steel wheel weights.

This change out of lead wheel weights occurs during routine tire maintenance, and the transition is going smoothly. The only obstacle identified to date is a limited number of vehicle models (less than 2%) with rim designs that do not accept the wheel weight tab attachment. (Alternative design wheel weights are being investigated.) Once this challenge is solved, state agencies will

request the use of the non-lead alternative wheel weights on passenger and light duty trucks serviced by more than 350 independent auto facilities.

Integrated Pest Management

Pests and pesticides can pose a significant risk to people, property and the environment. A number of well-documented studies have demonstrated the strong link between uncontrolled pest populations and risks to human health^{28 29 30}. These risks include increased rates of asthma and infant mortality^{31 32} and risk of exposure to infectious diseases such as *Salmonella enteritidis*³³, West Nile virus³⁴, Lyme disease³⁵ and hantavirus hemorrhagic fever³⁶. Likewise, pesticide use and exposure can also pose risks to both humans^{37 38 39 40 41} and the environment⁴². Pesticides have been documented to be pervasively distributed throughout our urban, rural and even pristine natural environments, persisting in some cases for decades after their use.⁴³ Integrated Pest Management (IPM) is a widely-accepted approach to minimizing all risks associated with pests and pesticides. IPM offers the best means of ensuring our homes, workplaces and environment are safe, healthy, and productive. IPM minimizes risks of property-damage and other economic losses. Studies have shown that IPM practices significantly reduce pesticide exposure risk and improve health⁴⁴

Integrated Pest Management (IPM) is a widely-accepted approach to minimizing risks associated with pests and pesticides by understanding the system in which the pest exists; by establishing economic or aesthetic injury thresholds and determining whether the organism warrants control; by monitoring pests and natural enemies; by selecting the appropriate system of cultural, mechanical, genetic, biological or chemical prevention or control techniques; by evaluating the pest management approaches used and by selecting, integrating and implementing some or all of these methods.^{45 46}

Although IPM practices are well recognized by agricultural producers and pest control professionals, the general public and retailers are not familiar with the concepts and benefits.

State of Maine Property Management Division IPM Policy

In keeping with the spirit of 'leading by example' and as directed by Governor Baldacci's Executive Order, the Bureau of General Services (BGS), in consultation with the Maine Department of Agriculture, drafted an IPM Policy and a Request for Proposals for IPM service bids. As directed by the Executive Order, the Maine IPM Council was asked to evaluate the feasibility of requiring that State of Maine pest management contractors be IPM-certified. The IPM Council determined that such a requirement is feasible for structural pest control contractors and made a formal recommendation to DAFS that priority be given to IPM-certified contractors.

IPM policy documents, applicable to office buildings and grounds under the control of BGS Property Management Division (PMD), are currently undergoing final review by Department of Administrative and Financial Services. It is intended that the IPM Policy and the IPM RFP will be implemented upon approval and will serve to establish a formal IPM program for PMD-managed properties. Key elements of the IPM Policy include 1) appointment of an IPM Coordinator to oversee the program; 2) assignment of a Building Coordinator to serve as a communication link between occupants, and the IPM Coordinator; 3) IPM training for PMD

staff, and 4) establishment of a record-keeping system for tracking pest management actions and evaluating program effectiveness.

V. Recommendations

Recommendations on expanded consumer and retailer education to promote markets for safer alternatives

A key strategy to achieve lasting improvements in public understanding of the risks involved in use of and exposure to chemicals and thus encouraging the use of safer chemicals is education. Currently, there is limited work and education concerning toxicology and environmental health in Maine.

1. Provide general education through a website and educational materials that provide some guidance and education on safer chemicals and include an outreach campaign to guide the public seeking such information to such materials.
2. Educational resources developed for the Maine School IPM Program and the State's BGS IPM Policy should be promoted as adaptable models for implementation of IPM on other public and private properties including municipalities, hospitals, colleges, multiple family residences, and commercial properties.
3. Increase support for public and retailer pest management and pesticide education.
4. Increase graduate level education in toxicology and environmental health by dedicating 1-2 fellowships in the Graduate School of Biomedical Sciences to the newly formed Toxicology and Environmental Health track in that program.
5. Increase undergraduate level education in toxicology and environmental health by providing funding for faculty hires to expand the "Toxicology and Environmental Health" minor at USM to an undergraduate major that students can specialize in.
6. Investigate appropriateness of access to K-12 curriculums in alignment with the Maine Learning results focused on Toxicology and environmental health and Integrated Pest Management.

Recommendations to support efforts to enhance current state initiatives

Environmental Preferable Procurement for Janitorial Products

7. Accept the offer of the SEIU Hazard Materials Awareness Training Program to conduct Hazard Materials Awareness training on janitorial products. The program would train Bureau of General Services staff on new janitorial supplies that will be purchased through the evolving Environmentally Preferable Procurement contract for Janitorial Supplies. This would enhance efforts of BGS janitorial staff to safely use the new janitorial products being introduced through Environmentally Preferable Procurement.

Integrated Pest Management

8. In order to fully implement the State of Maine IPM Policy, BGS would require additional resources beyond those currently available. The Task Force recommends that those resources be made available to BGS so that the policy can be as effective and functional as possible.

9. In order to fully implement the necessary IPM system, BGS would require additional resources beyond those currently available. The Task Force recommends that the necessary support and resources be made available to implement an effective record-keeping system to track pesticide use, pest monitoring records, IPM actions, and pest and pesticide-related complaints in state facilities.

Recommendations the Task Force will submit to the Maine Science and Technology Advisory Council [Executive Order Task Force duty IV.b.iv.]

Technological innovation is key to both the development of safer alternatives to toxic chemicals, and to allowing our companies to maximize the value of Maine's rich natural resource base. Green Chemistry, including the development of bio-based products from Maine agricultural and forest resources, offers the potential for economic growth and job expansion in this state. This innovative technology will supply a demand that already exists from successful Maine businesses committed to sustainable materials, processes, and products. Becoming preeminent in the field of Green Chemistry is a natural for this State and its businesses. To this end, the Task Force recommends that the State and the Maine Science and Technology Advisory Council support the expanded efforts of the University of Maine System and private industry to become leaders in the field of Green Chemistry and the emerging potential of bio-based products. This support should include, but is not limited to:

10. Support the creation within the University of Maine System of a Green Chemistry Program for Sustainable Production (GCPSP) coordinated between the University of Maine, Orono and the University of Southern Maine.

11. As part of the GCPSP, support the construction and funding of a Bio-Based Plastics Research and Processing Facility directed by the Chemical Engineering Department of the University of Maine, Orono. Such facility will provide research capacity in the areas of feedstock fermentation and polymerization, for applications based on industry needs in the areas of bio-plastic fibers, injection molding, building materials, and coatings and paints.

12. As part of the GCPSP, support the completion of construction and funding of the Maine Center for Technology and Environmental Health Facility at the University of Southern Maine, to provide expertise in toxicology and Green Chemistry research, and creation of a database of chemicals use and safer alternatives to support State policy efforts and provide technical assistance to industry.

13. Support the initial stages of creation of a PLA (polylactic acid) manufacturing facility in Aroostook County which would produce bio-based plastic building blocks from potatoes and other agricultural crops and potentially forest byproducts.

14. Increase the amount of research funding in the Maine Economic Incentive Fund (MEIF), which will allow for an increase to focus on research in Toxicology and Environmental Health and Green Chemistry.

VI. Next Steps

Next steps for the Task Force will include:

- Executive Order duty IV.b.ii.: to develop recommendations for a more comprehensive chemicals policy that requires safer substitutes to priority chemicals in consumer products and creates incentives to develop safer alternatives, on a state and regional basis; and
- Executive Order duty IV.b.iii.: to develop recommendations on expanded consumer education, retailer education and training, supply chain information and public right-to-know in order to promote markets for safer alternatives and
- Environmental health impacts from lack of chemical information.

VII. Attachments

Attachment (A) Executive Order Promoting Safer Chemicals in Consumer Products and Services 12 FY 06/07 and Order Amending the Executive Order Promoting Safer Chemicals in Consumer Products and Services 16 FY 06/07

Attachment (B) Task Force Promoting Safer Chemicals in Consumer Products and services
Member roster

Attachment (C) Tom's of Maine Process for Assessing Vendor Total Value

Attachment (D) Sample Material Safety Data Sheet (MSDS) Provided by Interface, Inc.

¹ Documents reviewed included:

United States Government Accountability Office. Chemical Regulation: Approaches in the United States, Canada, and the European Union (GAO-06-217R). Washington, D.C.: U.S. Government Printing Office, 2005. [hereinafter, GAO, 2005].

Wilson, M, Green Chemistry in California: A Framework for Leadership in Chemicals Policy and Innovation. California Policy Research Center, 2006. [hereinafter, "Cal. Report"]. Center for International Environmental Law. Cloudy Skies, Chance of Sun: A Forecast for U.S. Reform of Chemical Policy, 2006

ToSCA is not the only federal statute concerned with chemical safety, but, with respect to chemicals in consumer products, it is the primary federal regulatory mechanism. Chemicals classified as pesticides are separately regulated under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) which, unlike ToSCA, requires testing, review, and registration of pesticides before they are marketed. Pharmaceuticals are also separately regulated under the Federal Food, Drug, and Cosmetic Act, which also requires pre-market testing. Other federal and state laws that pertain to toxic chemicals are essentially "end-of-pipe" statutes that do not allow review of chemicals prior to their introduction into commerce, and regulate a relatively narrow range of chemicals. See Cal Report. p.20-21

² Plater Z., Abrams, R, Goldfarb, R. Environmental Law and Policy: Nature, Law, and Society, 3rd Edition. New York: Aspen Publishers, 2004. [hereinafter "Plater"] p. 830.

³ GAO, 2005, p. 2; Cal. Report, p. 17.

⁴ Cal. Report, p. 17.

⁵ Plater, p. 837; see also GAO, 2005, p. 5, comparing Canada and EU law.

⁶ Cal. Report, p. 19.

⁷ Roe D., Pease, W. Toxic Ignorance. In: The Environmental Forum. May/June 1998; 28.

⁸ Cal. Report, p. 19.

⁹ Corrosion Proof Fittings v. USEPA. 947F. 2d 1201 (5th Cir. 1991); Cal. Report, p.18; Plater, p.840

¹⁰ Cal. Report, p. xiv.

¹¹ Task Force member Mark Dobrovolny, Director of Product Supply for Tom's of Maine

¹² Task Force member Stacie Beyer Corporate Environmental Manager for Interface, Inc.

¹³ Mark Catlin Industrial Hygienist and Haz Mat Project Coordinator for the Service Employees International Union (SEIU) Education and Support Fund. Mr. Catlin is engaged in training worker throughout the use on Hazardous Materials issues.

¹⁴ "Each year, about 23,000 Californians are diagnosed with a preventable, deadly chronic disease that is attributable to chemical exposures in the workplace...About 6,500 Californians die each year as a result of chronic disease attributable to chemical exposures in the workplace." Cal. Report, p. 33. Similar estimates are not available for Maine.

¹⁵ Ken Geiser, PhD is Co-Director of the Lowell Center for Sustainable Production at the University of Massachusetts, Associate Professor in the Department of Work Environment and was the founding director and current Advisory Board chair of the Toxics Use Reduction Institute at U.Mass. Lowell. Dr. Geiser is the author of Materials Matter: Toward a Sustainable Materials Policy which sketches the history of materials use and the pathway for increased reliance on nontoxic environmentally sustainable materials.

¹⁶ Ken Geiser, PhD Lowell Center for Sustainable Production, September 29 2006 presentation to the Task Force.

¹⁷ From 1990-2004, under the Massachusetts TURA program, toxic chemical use declined by 41%, toxic byproducts (waste) was reduced by 65% and toxic chemicals shipped in products went down by 58%. Among businesses affected by the Massachusetts TURA, 70% of firms identified toxics use reduction options and 81% of those reported implementing at least some of them. Two-thirds of firms reported cost savings and health & safety benefits. From 1990-1997 the reported costs of the program were \$77 million and the monetized benefits were \$91 million (not including benefits to human health, ecology and non-TURA firms).

¹⁸ Toxics Use Reduction Institute, University of Massachusetts Lowell, Five Chemicals Alternatives Assessment Study, June 2006, www.turi.org.

¹⁹ The new international chemicals policies include the UN Rotterdam Convention on Prior Informed Consent, UN Stockholm Convention on the Elimination of Persistent Organic Pollutants (POPs), IOMC's "Globally Harmonized System of Classification and Labeling of Hazardous Chemicals" (GHS), and the United Nations Environment Program's SAICM (Strategic Approach to International Chemicals Management). Other new European Union (EU) chemicals policies in addition to REACH are the End of Life Vehicle Directive, Waste from Electronic and Electrical Equipment (WEEE) Directive and the Restriction on Hazardous Substances (RoHS) Directive.

²⁰ European Commission REACH website http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm

²¹ European Commission REACH website http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm <http://www.chemicalspolicy.org/>, which includes comprehensive resources on REACH and related chemicals policy initiatives.

²² See the University of Massachusetts at Lowell's Center for Green Chemistry, http://www.greenchemistry.uml.edu/html/ClickablePrinciplesproject_files/frame.htm, for an expression of the Twelve Principles of Green Chemistry.

²³ Presentation by Michael Bilodeau, Associate Director of Forest Bioproducts Research and Director of the Process Development Center at University of Maine at Orono.

²⁴ Presentation on initiative and a Seed Grant Proposal submitted to the Maine Technology Institute by Stacie Beyer, Corporate Environmental Manager for Interface, Inc.

²⁵ Vendors must also meet the following energy efficiency guidelines: lighting, wherever possible, must meet Energy Star lower energy consumption standards; vendors must ship all products with the Energy Star low-power feature activated or enabled; if the product is shipped without the Energy Star low-power feature activated or enabled or without the Energy Star seal, it must include the manufacturer's certification specifying the product is Energy Star compliant.

²⁶ Robert A. Root 2004 Lead Loading of Urban Streets by Motor Vehicle Wheel Weights

²⁷ USGS Stocks and Flows of Lead-Based Wheel Weights in the United States Open-File Report 2006-1111.

²⁸ Platts-Mills, T.A.E. 1994. How environment affects patients with allergic disease: indoor allergens and asthma. *Ann Allergy* 72: 381-384.

²⁹ Perera FP, et al. 2003. Effects of transplacental exposure to environmental pollutants on birth outcomes in a multiethnic population. *Environ Health Perspect.*, 111:201-206.

³⁰ Schal, C. and R.L. Hamilton, 1990. Integrated suppression of synanthropic cockroaches. *Ann. Rev. Entomol.* V. 35: 521-551

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- ³¹ Rosenstreich DL, Eggleston P, Kattan M, Baker D, Slavov RG, Gergen P, et al. The role of cockroach allergy and exposure to cockroach allergen in causing morbidity among inner-city children with asthma. *N Engl J Med*. 1997;336:1356–1363.
- ³² Sporik, R., et al. 1990. Exposure to house-dust mite allergen (Der p I) and the development of asthma in childhood. A prospective Study. *N Engl J med* 323: 502-507.
- ³³ Ash, N., and B. Greenburg. 1980. Vector potential of the German cockroach in dissemination of *Salmonella enteritidis* serotype typhimurium. *J. Med. Entomol.* 17: 417-23.
- ³⁴ Michael J. Turell, Monica L. O'Guinn, David J. Dohm, James W. Jones. 2001. Vector Competence of North American Mosquitoes (Diptera: Culicidae) for West Nile Virus. *Journal of Medical Entomology* 38:130-134
- ³⁵ Steere, Allen, C. 1991. Lyme Disease. *NE J Med* Volume 345:115-125
- ³⁶ Childs, J. E. et al. 1994. Serologic and genetic identification of *Peromyscus maniculatus* as the primary rodent reservoir for a new hantavirus in the southwestern United States. *J. Infect. Disease.* 169(6):1271-80
- ³⁷ Whitmore, R.W., et al. 1994. Non-occupational exposures to pesticides for residents of two US cities. *Arch. Environ. Contam Toxicol* 26: 47-59.
- ³⁸ Whyatt R. M., et al. Residential pesticide use during pregnancy among a cohort of urban minority women. *Environ Health Perspect.* 2002;110:507–514.
- ³⁹ Perera F. P., et al. 2003. Effects of transplacental exposure to environmental pollutants on birth outcomes in a multiethnic population. *Environ Health Perspect.*, 111:201–206.
- ⁴⁰ Michael C. R., et al. 2003. Use of agricultural pesticides and prostate cancer risk in the agricultural health study cohort. *Am J Epidemiol.*; 157:800-814
- ⁴¹ Eskenazi, B., A. Bradman, R. Castorina. 1999. Exposures of children to organophosphate pesticides and their potential adverse health effects. *Environ. Health Perspective.* v. 107 Suppl 3:409-19
- ⁴² Larson, SJ, Capel, PD, Majewski, MS. 1997. Pesticides in surface waters. Distribution, trends, and governing factors. Ann Arbor Press, Chelsea, MI.
- ⁴³ U.S.G.S. Pesticides in the Nation's Streams and Ground Water, 1992-2001 Circular 1291(2006) Robert j. Gilliom, Jack E. Barbash, Charles G. Crawford, Pixie A. Hamilton, Jeffrey D. Martin, Naomi Nakagaki, Lisa H. Nowell, Jonathan C. Scott, Paul E Stackelberg, Gail P. Thelin, and David M. Wolock
- ⁴⁴ Landrigan, P. J., et al. 1999. Pesticides and Inner-City Children: Exposures, Risks, and Prevention. *Environ Health Perspectives Suppl.* 107 (S3): 431-437
- ⁴⁵ Presentation by Dr. Kathy Murray, Entomologist Maine Department of Agriculture and Jeremy Caron Special Assistant to the Commissioner of Maine Department of Administrative and Financial Services.
- ⁴⁶ Definition of IPM Maine Statutes Title 7, Chapter 413, INTEGRATED PEST MANAGEMENT (heading: PL 1991, c.609, s2)

AN ORDER PROMOTING SAFER CHEMICALS IN CONSUMER PRODUCTS AND SERVICES

WHEREAS, Maine is dedicated to the mutually dependent goals of economic development, public health promotion and environmental protection; and

WHEREAS, further development of safer alternatives to hazardous chemicals in Maine has the potential to spur business growth, create jobs, improve public health, lower the costs of health care and special education, and protect the environment; and

WHEREAS, the University of Maine actively participates in the New England Green Chemistry Consortium and is pursuing federal funding to support research and development of chemical engineering solutions that avoid the use of hazardous materials, including sustainable bio-based chemicals and plastics derived from Maine forest and agricultural products such as potatoes; and

WHEREAS, the production, use and disposal of consumer products containing hazardous chemicals poses preventable risks of harm to human health and the environment in Maine and elsewhere; and

WHEREAS, a growing body of scientific evidence points to chemical exposures as preventable risk factors in a number of chronic diseases, disabilities and premature deaths; and

WHEREAS, Maine Center for Disease Control (Maine CDC) has issued health advisories due to the presence of persistent, bioaccumulative and toxic chemicals (PBTs), such as mercury, chlorinated organic compounds and cadmium in Maine fish and game; and

WHEREAS, there are data demonstrating ongoing and substantial increases in human breast milk and blood of chemicals known to occur in consumer products, such as PBDEs, which are among the most widely used brominated flame retardants (BFRs); and

WHEREAS, the federal Centers for Disease Control and Prevention released the third National Report on Human Exposure to Environmental Chemicals, the most extensive biomonitoring study ever conducted of the U.S. population, which detected 148 chemicals in blood or urine, although in many cases health risks have not been determined; and

WHEREAS, scientific concerns are growing about endocrine disrupting chemicals (EDCs), like bisphenol A, that affect the hormone system; and

WHEREAS, Maine has joined others states in passing laws to require clean products and industrial processes so as to reduce or eliminate environmental releases of mercury, dioxin, arsenic, BFRs, lead and other chemical pollutants; and

WHEREAS, the State of Maine has established a broad range of product procurement practices oriented toward the preservation of natural resources, the promotion of environmental sustainability, and the protection of the health and safety of employees, citizens, and visitors of the State; and

WHEREAS, state government should continue to exercise leadership in developing and promoting safer substitutes to chemicals with inherently hazardous properties when such alternatives are available, effective and affordable; and

WHEREAS, several Maine-based companies are widely recognized for the development of products and services that eliminate or minimize the use of hazardous chemicals and environmentally harmful materials; and

WHEREAS, environmental technology is one of the seven targeted technology sectors identified in Maine statute; and

WHEREAS, it is in the best interests of the people of Maine to continue and expand state leadership in promoting sustainable economic development and environmental public health protection through the elimination of the use of and environmental release and discharge of hazardous chemicals of concern within the next generation.

NOW, THEREFORE, I, John E. Baldacci, Governor of the State of Maine, do hereby order and direct as follows:

I. Consumer Education for Healthy Homes

By July 1, 2006, the Department of Environmental Protection (DEP) and the State Planning Office (SPO) shall incorporate readily available information on source reduction and safer alternatives to hazardous chemicals in consumer products into their public education efforts, including websites, regarding household hazardous waste, universal waste and solid waste.

By July 1, 2007, the Maine CDC, shall develop and distribute a public education brochure that informs the public on the identification and prevention of exposure to environmental health hazards commonly encountered in the home. Maine CDC and the DEP will coordinate on similar publications and outreach efforts targeting environmental health hazards commonly encountered in the home.

The Integrated Pest Management (IPM) Council Coordinators from the Department of Agriculture and University of Maine Cooperative Extension will continue to distribute an informational brochure to promote the use of existing web resources for educating homeowners about less toxic alternatives to pesticides commonly employed in and around Maine homes. Distribution will occur as resources allow. An electronic copy will be made available to organizations who may also wish to distribute this brochure.

The DEP shall continue to support a regional effort to promote healthy homes and prevent chemical hazards through coordinated efforts involving the Environmental Council of the States (ECOS) and the Association of State and Territorial Health Officers (ASTHO).

II. Priorities for Safer Alternatives to Toxic Chemicals

The following are next steps for immediate action on chemicals that the State of Maine has already identified as a priority:

Mercury. The DEP shall take steps to further progress toward achieving the regional goal adopted in 1998 in cooperation with the New England Governors and Eastern Canadian Premiers to “virtually eliminate mercury from anthropogenic (human-caused) sources” as resources allow. These steps include, but are not limited to, submission of legislation to phase out miniature batteries containing mercury, improving mercury thermostat recovery at end of life, expanding other efforts to divert mercury from the waste stream and to reduce emissions from waste disposal facilities. The DEP shall continue to promote regional efforts to reduce mercury emissions that come into Maine from sources located in other states.

Lead. The Maine CDC in cooperation with the DEP shall contract for a report assessing lead-free alternatives to the current use of lead in consumer products. The report will be funded by allocations from the Lead Poisoning Prevention Fund with a completion goal around April 2008.

BFRs. By July 1, 2006, the DEP shall review emerging information related to the availability of alternatives to the BFRs known as DecaBDE and shall issue a report re-examining the department's preliminary conclusion that safer alternatives are nationally available.

Pesticides. The Bureau of General Services (BGS), in consultation with the Board of Pesticides Control (BPC) and the University of Maine Cooperative Extension staff, shall develop policies that call for the least toxic method of pest control and the least amount of pesticide use in buildings and on grounds that will allow safe and comfortable occupancy by State employees, visitors and the general public. To this end, BGS’ policies shall include the following:

- a. State owned and managed office buildings and their grounds shall be managed in accordance with IPM principles and consistent with pertinent laws and regulations. The policies shall include provisions for the participation of designated building representatives in decisions pertaining to pest management within their building and general occupant notification procedures by the building representatives.
- b. New contracts for pest management services shall require the vendor to comply with BGS policies addressing pest management. The policies shall be incorporated into contract renewals and amendments when feasible.
- c. Other task forces and agencies of state government shall cooperate with BGS in providing technical advice about pesticides, and services as policies are developed.
- d. The BGS, in cooperation with the Department of Agriculture, and the University of Maine Cooperative Extension Pest Management Office, will develop and implement a plan for providing IPM training to BGS employees responsible for management of State-owned buildings and grounds. Implementation will proceed as resources are available.
- e. Consistent with IPM principles, the BGS policies will prohibit use of fertilizer-pesticide mixtures or other pesticides for purely cosmetic purposes.
- f. BGS shall review the Department of Agriculture’s model policy prepared for and used by Maine schools, and consider adapting it to state buildings and grounds.

- g. The Department of Agriculture, through the IPM Council, will explore available IPM certification programs and will provide recommendations to BGS on the feasibility of requiring that contracts for pest management on State-owned and State-leased properties include provisions requiring that service providers be IPM-certified.

III. State Purchasing of Safer Alternatives

The State of Maine shall continue its commitment to environmentally preferable procurement so as to purchase products and contract for services that have a reduced negative impact on human health and the natural environment in comparison to other products and services that serve similar purposes. To that end, the State shall carry on its efforts to seek ways to increase the acquisition of such products and services to the extent feasible, balancing price, performance, availability, and safety.

In carrying out this commitment, the Department of Administrative and Financial Services (DAFS), the Division of Purchases, and the Department of Transportation (DOT) in cooperation with other executive branch agencies, shall avoid products and services that contain, use or release chemicals that are PBTs or carcinogens whenever safer alternatives are available, effective and affordable. The Governor's Task Force to Promote Safer Chemicals in Consumer Products, created herein at section IV, shall direct the DAFS and the DOT to a list or other information from authoritative resources to identify PBT's and carcinogens. The Task Force will consult with the Division of Purchases to ensure the information source will be realistically useable by purchasing staff. Immediate priorities for implementing this policy include, but are not limited to:

- a. The state fleet is transitioning to lead-free wheel weights. The DOT is researching and trial testing a variety of lead free wheel weight alternatives. The DOT's conclusions will be shared with other state fleet managers to inform their transition to lead-free wheel weights.
- b. Lead-free alternatives are expected to be the replacement product at state owned and operated garage and maintenance facilities for passenger cars and light duty trucks by July 2006. When state fleet vehicles are serviced in privately owned garages, state officials shall specify that lead-free weights must be installed if available; however, if not available, lead weights may be installed. They must be replaced with lead-free weights when next serviced at a state garage or maintenance facility.
- c. When practical, the State will procure uniforms and clothing made of materials and constructed in a manner that will not require laundering by dry cleaning with perchloroethylene (Perc). For employees who are provided a stipend for uniforms, information on alternative cleaning methods that do not use Perc will be provided annually with uniform maintenance allowance stipends. The DEP will provide the information on alternative cleaning in electronic format for use by affected state agencies. Exempt from these requirements are employee uniforms/clothing labeled with laundering instructions that allow machine laundering in water.

IV. Task Force to Promote Safer Chemicals in Consumer Products

The Governor's Task Force to Promote Safer Chemicals in Consumer Products is hereby established.

a. Membership

The Task Force shall consist of twelve (12) members appointed by, and serving at the pleasure of the Governor, including the Deputy Commissioner, Department of Environmental Protection, who shall chair the Task Force; the Deputy Commissioner, Department of Economic and Community Development or designee; the State Toxicologist or designee, an IPM Council Coordinator (the Department of Agriculture IPM Coordinator and the Cooperative Extension IPM Coordinator will share staffing of this single position; in the event of voting this position will have only one vote); three members from the environmental public health community including a representative from the Alliance for a Clean and Healthy Maine, a Maine environmental policy organization and a Maine public health organization; three members from the business community including a representative from a Maine manufacturer that practices environmentally sustainable production, a Maine business association and one other Maine business; one representative from a University in the University of Maine system who is involved in research and development; and, one representative of a Maine labor organization.

Other state agencies shall be called on to participate when Task Force discussion relates to their area of responsibility and expertise. The Task Force may establish committees as necessary to work on specific tasks and may invite other persons with expertise in those fields to provide information that may be helpful to the work of the committees and the Task Force.

b. Duties

The purpose of the Task Force is to identify and promote the use and development of safer alternatives to hazardous chemicals in consumer goods and services made, provided or sold in Maine so as to benefit public health, the environment and the economy for all Maine people. The specific duties of the Task Force are to:

- i. Survey relevant knowledge and activities related to promoting safer alternatives to priority chemicals in the areas of environmental public health policy development, green chemistry research and development, and economic incentives;
- ii. Develop recommendations for a more comprehensive chemicals policy that requires safer substitutes to priority chemicals in consumer products and creates incentives to develop safer alternatives, on a state and regional basis;
- iii. Develop recommendations on expanded consumer education, retailer education and training, supply chain information and public right-to-know in order to promote markets for safer alternatives;
- iv. Develop recommendations for submission to the Maine Science and Technology Advisory Council on expanded research and development of safer alternatives to priority chemicals in consumer products, including investment in green chemistry research and development and the possibility of developing bio-based plastics from Maine-based agricultural and forest products.

c. Scope

For purposes of this Executive Order, the term “priority chemicals” includes substances and their breakdown products including PBTs, very persistent and very bioaccumulative (vPvB) chemicals, carcinogens, mutagens or reproductive toxins (CMRs), neurotoxins, and endocrine disrupting chemicals (EDCs) that have been demonstrated by biomonitoring studies to be present in human tissues and fluids, that are produced in high volumes or used in ways that may result in high exposures, or that pose generally equivalent concerns as determined by the state’s qualified experts or by a body considered to be authoritative by such experts. Priority chemicals include, but are not limited to, toxic substances listed by the DEP in its programs that address toxic releases, air toxics and water toxics. For purposes of this Executive Order, “consumer products” means items or materials sold or distributed for residential or commercial use, but excludes those intended exclusively for industrial use.

d. Procedures

The Task Force shall meet at times and places called by the chair. Under the direction of the Deputy Commissioner, the DEP shall provide staffing assistance to the Task Force. Significant research by agency staff will occur at the discretion of agency staff and may need to be addressed within the Task Force’s proposed recommendations rather than within the duties of the Task Force. The members of the Task Force shall serve without compensation. The Task Force may accept staffing and other administrative or program support from outside sources as it deems appropriate to its duties.

e. Reports

The Task Force shall submit an interim report to the Governor by November 30, 2006 and a final report by October 1, 2007. Each of these reports shall include recommendations, including proposed legislation, for safer chemicals policy development and consumer education and related information as required under Duties b.ii and b.iii in this section. The Task Force shall also submit interim recommendations by November 30, 2006 and final recommendations by October 1, 2007 to the Maine Science and Technology Advisory Council on expanded research and development opportunities as required under Duties b.iv in this section. Upon submission of the final report and the final recommendations, the Task Force shall dissolve.

V. Costs of Implementation

State agencies will absorb the costs for their state staff to participate in the Task Force. The costs for implementing the tasks included in this Executive Order will be absorbed by the implementing agencies unless otherwise noted. The cost of implementing recommendations will be addressed as part of the recommendations.

Effective Date

The effective date of this Executive Order is February 22, 2006.

John E. Baldacci
Governor

AN ORDER AMENDING THE ORDER PROMOTING SAFER CHEMICALS IN CONSUMER PRODUCTS AND SERVICES

WHEREAS, the Task Force to Promote Safer Chemicals in Consumer Products was created pursuant to Executive Order 12 FY 06/07 (dated February 22, 2006) to identify and promote the use and development of safer alternatives to hazardous chemicals in consumer goods and services made, provided or sold in Maine so as to benefit public health, the environment and the economy for all Maine people; and

WHEREAS, changes to the Executive Order to better facilitate the operation of the Task Force are needed before the Task Force begins its work:

NOW, THEREFORE, I, John E. Baldacci, Governor of the State of Maine, do hereby modify Executive Order 12 FY 06/07 in the following manner:

*By amending Section II, **Priorities for Safer Alternatives to Toxic Chemicals**, paragraph three, **BFRs**, to read as follows:*

By January 5, 2007, the DEP shall review emerging information related to the availability of alternatives to the BFRs known as DecaBDE and shall issue a report re-examining the department's preliminary conclusion that safer alternatives are nationally available.

*By amending Section IV, subsection a. **Membership**, first paragraph, to read as follows:*

The Task Force shall consist of thirteen (13) members appointed by, and serving at the pleasure of the Governor, including the Commissioner, Department of Environmental Protection, who shall chair the Task Force; the Deputy Commissioner, Department of Economic and Community Development or designee, who shall act as chair in the absence of the chair; the State Toxicologist or designee, an IPM Council Coordinator (the Department of Agriculture IPM Coordinator and the Cooperative Extension IPM Coordinator will share staffing of this single position; in the event of voting this position will have only one vote); three members from the environmental public health community including a representative from the Alliance for a Clean and Healthy Maine, a Maine environmental policy organization and a Maine public health organization; three members from the business community including a representative from a Maine manufacturer that practices environmentally sustainable production, a Maine business association and one other Maine business; one representative from a University in the University of Maine system who is involved in research and development; one representative of a Maine labor organization, and a public member.

Effective Date

The effective date of this Executive Order is June 27, 2006.

John E. Baldacci, Governor

Task Force to Promote Safer Chemicals in Consumer Products

State Agency and University positions	
Chair, Commissioner DEP	David P. Littell
Deputy Commissioner DECD or designee act as Chair in absence of Chair	Thaxter Trafton (Acting Deputy Commissioner DECD) Brian Dancause designee
State Toxicologist or designee	Deborah Rice
IPM Council Coordinators Agriculture Cooperative Extension	Kathy Murray James F. Dill
Environmental Public Health Nominations by the Governor 7.27.07	
Alliance for a Clean & Healthy Maine	Sharon Tisher Orono
Maine Environmental policy organization	Nicholas T. Bennett Augusta
Maine public health organization	Michael Belliveau Old Town
Business Nominations by the Governor 7.27.06	
Maine manufacturer that practices environmentally sustainable production	Stacie R. Beyer Bangor
Maine business association	Steven R. Pinette Scarborough
Other Maine business	Mark S. Dobrovolny Kennebunk
Other Nominations by the Governor 7.27.06	
University in the University of Maine System who is involved in research and development	John P. Wise, Sr. Portland
Maine labor organization	Dana Graham, President Augusta
Public member	Melinda Davis Augusta

- ☐ Ingredient for new product (R&PD)
- ☐ Ingredient for existing product (Product Supply)



PROCESS FOR ASSESSING VENDOR TOTAL VALUE

Vendor Name & Address:	Ingredient Generic Name, Brand Name, Vendor Part #:
Vendor Contact Name:	Ingredient Manufacturer (if different):
Vendor Contact Title:	Vendor email:
Vendor Phone #:	Vendor Fax #:

	Criteria	Documentation	Status
For Individual Ingredient	Not tested on animals	Signed letter	
	Genetically Modified Organism Status	Signed letter or policy statement	
	Kosher Certification	From any certifying agency; if not kosher, why not?	
	Ingredient is safe	Safety Test information, GRAS listing, MSDS	
	Meets Tom's of Maine specifications	Specification sheet	
	Sample meets Tom's of Maine specification	Certificate of Analysis for sample lot	
	Vendor certifies ingredient is naturally derived	Signed letter	
	Vendor's manufacturing process for ingredient is natural, sustainable, responsible, and fulfills the Company Mission	Signed letter describing process, facility, & location.	
	Sources of all ingredients going into vendor's manufacturing process for this item are natural, sustainable, responsible, and fulfill the Company Mission	Signed letter describing ingredients and process for obtaining them	
	R&PD review of ingredient performance within product	Package compatibility, stability, organoleptic evaluation, physical/chemical properties	
	Special R&PD review of ingredient performance within OTC products	Bio-availability of drug active. Regulatory impact. Additional testing requirements.	
Logistics	Price (for different volume breaks) and Transportation cost		
	Lead time, warehouse location, options for vendor managed inventory		
	Storage conditions & Container options		
Vendor	Policy on animal testing, Genetically Modified Organisms, and Kosher certification	Signed letter	
	Vendor's manufacturing processes and ingredient sources are natural, sustainable, and responsible	Signed letter describing processes, facilities, & locations.	
	Vendor's corporate values/stewardship	Press clippings. Company documents	

	Criteria	Documentation	Status
For Tom's Use Only	<p>Case by case assessment against the Tom's of Maine Stewardship model</p> <ul style="list-style-type: none"> • Natural • Sustainable • Responsible <p>Impact of changing ingredient on corporate communications</p> <ul style="list-style-type: none"> • Art or text on carton, tube, label, shrink • Website communications • Collateral material 	<p>Tom's of Maine Stewardship Model</p> <p>Design brief</p>	

Material Safety Data Sheet

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Revised: 03/21/2003

PRODUCT NAME: MICROBAN LIQUID FORMULATION 9200-200
PRODUCT DESCRIPTION: MICROBAN LIQUID FORMULATION 9200-200
CASRN:
MANUFACTURER:

Este Avenue
Cincinnati, OH 45232
Phone: 800-634-2436 Fax: 513-482-5510

EMERGENCY NUMBERS:
CHEMTREC: 800-424-9300

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL	CONCENTRATION (Wt. %)	EXPOSURE LIMITS
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Proprietary Blend

SECTION 3: HAZARDS IDENTIFICATION

***** Emergency *****
***** Overview *****

WARNING!

Irritating to eyes, respiratory system and skin.

Clear to pale yellow liquid

SKIN CONTACT:

Contact with the skin causes irritation.

EYE CONTACT:

Causes irritation.

INHALATION:

Irritating to respiratory system.

INGESTION:

Harmful if swallowed.

CHRONIC EFFECTS:

Chronic overexposure may cause kidney and/or liver damage.

OTHER HEALTH EFFECTS:

PRIMARY ROUTES OF EXPOSURE: Inhalation, Skin, Oral

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
May aggravate preexisting medical conditions.

ENVIRONMENTAL HAZARDS:

None available. This product is expected to be toxic to aquatic organisms.

SECTION 4: FIRST AID MEASURES

SKIN CONTACT:

Wash thoroughly with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. Discard footwear that has been contaminated on the inner surfaces. If irritation should develop, get medical attention.

EYE CONTACT:

Immediately flush with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention immediately.

INHALATION:

Harmful if inhaled. Remove to fresh air. Seek immediate medical attention.

INGESTION:

DO NOT INDUCE VOMITING. Give one or two glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: >212 Deg F (Pensky-Martens Closed Cup)

LFL: Not Determined

UFL: Not Determined

AUTOIGNITION TEMPERATURE Not Determined

RECOMMENDED EXTINGUISHING MEDIA:

Foam, Water fog

SPECIAL FIRE FIGHTING PROCEDURES:

Perform only those fire fighting procedures for which you have been trained. Firefighters should wear self contained breathing apparatus in the positive pressure mode with a full facepiece when there is a possibility of exposure to smoke, fumes or hazardous decomposition

products.

UNUSUAL FIRE OR EXPLOSION HAZARDS:
None Known

HAZARDOUS COMBUSTION PRODUCTS:
Decomposition produces oxides of carbon, nitrogen and hydrochloric acid

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO TAKE IN CASE OF SPILL OR LEAK:
Add dry material to absorb spill (if large spill, dike to contain).
Using recommended protective equipment, pick up bulk of spill and
containerize for recovery or disposal. Flush area with water to remove
residues.

ENVIRONMENTAL IMPACT:
This product may be harmful to aquatic life. Do not discharge effluent
containing this product in any manner without guidance from your State
Water Board or the Regional Office of The EPA.

SECTION 7: HANDLING AND STORAGE

Avoid contact with eyes, skin and clothing. Avoid breathing mist,
vapour or dust. Keep container closed. Use with adequate ventilation.
Wash thoroughly after handling.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:
Tight fitting chemical safety goggles.

SKIN PROTECTION:
Wear appropriate chemical resistant gloves.

RESPIRATORY PROTECTION:
None required under normal conditions of use. NIOSH/OSHA-approved
respirator if necessary. Follow manufacturer's recommendations.

ENGINEERING CONTROLS:
None required under normal conditions of use. NIOSH/OSHA-approved
respirator if necessary. Follow manufacturer's recommendations.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
APPEARANCE: Clear to pale yellow liquid

ODOR: Slight
ODOR THRESHOLD: Not Available
pH: 5.1 @ 5 %
MELTING POINT: Not Determined
BOILING POINT: 7258 Deg C
SPECIFIC GRAVITY: 1.1
SOLUBILITY IN WATER: Moderate - (1 to 10 %)
PERCENT VOLATILES (by Wt.): Not Determined
VAPOR DENSITY: Heavier than Air
VAPOR PRESSURE: Not Determined
EVAPORATION RATE (N-BUTYL ACETATE=1): Not determined
VOC CONTENT (EPA Method 24): Not Determined

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Normally Stable

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBLE MATERIALS:

Strong acids, bases and oxidizing agents.

CONDITIONS TO AVOID:

Not Determined or None Known

HAZARDOUS DECOMPOSITION PRODUCTS:

Decomposition produces oxides of carbon, nitrogen and hydrochloric acid

SECTION 11: TOXICOLOGICAL INFORMATION

No toxicity information available or testing conducted on this product.
Any health or toxicological information included in Section 3 was based
on data associated with the components or an analogous product.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY:

This product may be harmful to aquatic life. Do not discharge effluent
containing this product in any manner without guidance from your State
Water Board or the Regional Office of The EPA.

ENVIRONMENTAL FATE:

Environmental fate has not been evaluated for this product.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of product by incineration at an approved hazardous chemical waste facility (or by other approved methods) in accordance with applicable Federal, State and local regulations. Avoid landfilling liquids. Since emptied container retains product residues (vapor and liquid) all labeled hazard precautions must be observed.

SECTION 14: TRANSPORTATION INFORMATION

INSECTICIDES, FUNGICIDES, INSECT/ANIMAL
REPELLENTS, NOI
NMFC: 102120

The information provided is for domestic highway transportation only. This product may be regulated differently when shipped in other types of containers or by modes other than that addressed by this section of the MSDS. For information, please contact Regulatory Affairs at 513/482-5022.

For RQ applicability, please see Section XV.

SECTION 15: REGULATORY INFORMATION

TSCA INVENTORY STATUS:

This product and/or all of its components are either included on or exempt from the TSCA Inventory of Chemical Substances.

TSCA 12(b) COMPONENTS:

None

SARA 311/312 HAZARD CATEGORIES: Acute

SARA 313 TOXIC CHEMICALS:

None

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES:

Ethylene Oxide(75-21-8) < 0.0011 %
Formaldehyde(50-00-0) < 0.0005 %

CERCLA HAZARDOUS SUBSTANCES:

Ethylene Oxide(75-21-8) < 0.0011 %
Acetaldehyde(75-07-0) < 0.0007 %
1,4-Dioxane(123-91-1) < 0.0006 %
Formaldehyde(50-00-0) < 0.0005 %

CALIFORNIA PROPOSITION 65 COMPONENTS:

WARNING ! This product contains a chemical (or chemicals) known to the State of California to cause cancer, birth defects and/or other reproductive harm.

Ethylene Oxide(75-21-8) < 0.0011 %

Acetaldehyde(75-07-0) < 0.0007 %
1,4-Dioxane(123-91-1) < 0.0006 %
Formaldehyde(50-00-0) < 0.0005 %

SECTION 16: OTHER INFORMATION

HMIS RATINGS: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0

NFPA RATINGS: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0 OTHER: None

THE FOLLOWING WARNING INFORMATION IS PROVIDED ON THE LABEL FOR THIS PRODUCT:

WARNING!

Irritating to eyes, respiratory system and skin.

FIRST AID - INHALATION:

Harmful if inhaled. Remove to fresh air. Seek immediate medical attention.

FIRST AID - SKIN CONTACT:

Wash thoroughly with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. Discard footwear that has been contaminated on the inner surfaces. If irritation should develop, get medical attention.

FIRST AID - EYE CONTACT:

Immediately flush with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention immediately.

FIRST AID - INGESTION:

DO NOT INDUCE VOMITING. Give one or two glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center. Never give anything by mouth to an unconscious person.

HANDLING AND STORAGE:

Avoid contact with eyes, skin and clothing. Avoid breathing mist, vapour or dust. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

ABBREVIATIONS USED:

ND or N/D = Not Determined

NA or N/A = Not Applicable or Not Available

NE or N/E = Not Established

N/AP = Not Applicable

All information, recommendations, and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, express or implied, is made by Cognis

Corporation as to the effects of such use, the results obtained, or the safety and toxicity of the product nor does Cognis Corporation assume any liability arising out of use, by others, of the product referred to herein. The information herein is not to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

PREPARED BY:

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