Report of the Executive Order 4 (EO 4) Procurement Subcommittee to the EO 4 Interagency Committee Regarding the Advisory Council Recommendation to Adopt a "Green Procurement Chemical Avoidance List"

Table of Contents

REPORT OF THE EXECUTIVE ORDER 4 (EO 4) PROCUREMENT SUBCOMMITTEE TO THE EO 4 INTERAGENCY COMMITTEE REGARDING THE ADVISORY COUNCIL RECOMMENDATION TO ADOPT A "GREEN PROCUREMENT CHEMICAL AVOIDANCE LIST"

On December 4, 2009, the Advisory Council presented to the Interagency Committee its recommendation and supporting materials regarding chemicals and procurement. See ogs.state.ny.us/EO/4/Docs/RecommendationOnChemicalsToAvoid.pdf. Advisory Council member Stephen Rosario presented a dissenting opinion, available at ogs.state.ny.us/EO/4/Docs/NYSCA_DissentingOpinionOn_CHEMICALS_LIST_20090914.pdf. Both the majority and minority made presentations at the December 22, 2009, Interagency Committee meeting. At the conclusion of the presentations, the Interagency Committee voted to refer the recommendation to the Procurement Subcommittee (Subcommittee) for further review. This report summarizes that review and attaches the materials provided by the Advisory Council majority and minority in response to a draft proposal prepared by the Subcommittee and shared with the Advisory Council.

The Subcommittee discussed the recommendation in several of its meetings and developed a proposed approach for the consideration of chemicals in the development of green specifications. The Subcommittee describes its proposed approach as follows:

Executive Order No. 4 Interagency Committee on Sustainability and Green Procurement

Consideration of Chemicals in the Development of Green Specifications

Executive Order No. 4 (EO 4) charges the Interagency Committee on Sustainability and Green Procurement with the development of green procurement specifications for use by state agencies and public authorities. When choosing priority categories and developing green specifications, EO 4 directs the Committee to consider, among other factors, commodities, services and technology that reduce or eliminate the health and environmental risks from the use or release of toxic substances; minimize risks of the discharge of pollutants into the environment; minimize the toxicity of packaging; protect public health and the environment, including children; and embody pollution prevention and sustainable production. The primary purpose of identifying chemicals to be aware of in green procurement is to assist the Interagency Committee on Sustainability and Green Procurement ("Committee") in meeting the goals of EO 4. An added benefit is informing the market of chemicals to be aware of in green procurement.

The federal government has identified chemicals that pose potential harm to human health and the environment. See current U.S. Environmental Protection Agency (EPA) Waste Minimization Priority List (epa.gov/osw/hazard/wastemin/priority.htm), and U.S. Department of Health and Human Services National Toxicology Program, current Report on Carcinogens, List of Chemicals Known and Reasonably Anticipated to be Human Carcinogens (ntp.niehs.nih.gov/index.cfm?objectid=32BA9724-F1F6-975E-7FCE50709CB4C932). In addition, pursuant to the federal Toxic Substances Control Act (TSCA), certain chemicals of concern have been identified by the EPA in Action Plans that outline the risks that each chemical may present and identify specific actions EPA will be taking. (epa.gov/oppt/existingchemicals/pubs/ecactionpln.html).

In accordance with its practice since EO 4 was signed, the Committee shall continue to consider chemicals that pose potential health and environmental impacts, including, but not limited to, chemicals identified in the above sources, when developing green procurement specifications and evaluating existing standards and certification programs. The Committee may, depending on available resources, consider additional information that can be obtained with reasonable effort.

The identification of chemicals to consider in green procurement should not be construed as a ban on the purchase of commodities, services or technology containing and/or using such chemicals. Depending on each commodity, service or technology, and whether sufficient alternatives exist in the marketplace, procurement specifications may restrict or allow considered chemicals to be used or contained in certain commodities, services or technologies (e.g., mercury in fluorescent lamps).

Advisory Council Provides Feedback on Subcommittee Proposal

The foregoing language was shared with the Advisory Council on October 6, 2010, and Advisory Council members were invited to the Subcommittee's October 14 meeting. Advisory Council members Anne Rabe and Stephen Rosario attended, gave presentations and took questions from the Subcommittee. Member Patti Wood arrived while the meeting was in progress, and her written comments described below were distributed at the meeting. The members supplemented their presentations with the following materials:

•Memo dated 10/14/10 from the New York State Chemical Alliance

•Letter dated 10/6/10 from the Center for Health, Environment & Justice; Grassroots Environmental Education; Great Neck Breast Cancer Coalition; Huntington Breast Cancer Action Coalition; Prevention is the Cure; Western NY Council on Occupational Safety & Health

•Updated Summary of Recent Research on Chemicals on the Chemical Avoidance List Recommended by the EO4 Advisory Council October 2010. Summary prepared by Patti Wood and dated 10/3/10.

•Letter dated 10/12/10 enclosing "Preliminary Worksheet on Chemicals for Consideration in Green Procurement." Letter signed by Center for Health, Environment & Justice; Grassroots Environmental Education; Great Neck Breast Cancer Coalition; Huntington Breast Cancer Action Coalition; Prevention is the Cure; Western NY Council on Occupational Safety & Health; and Scot Case of TerraChoice Environmental Marketing. The letter describes the worksheet as providing "contextual information that may be of value to the Subcommittee when they undertake the task of writing specifications."

•Written statement dated 10/14/10 from Patti Wood, Executive Director of Grassroots Environmental Education, hand-delivered at the EO4 Advisory Council Meeting. Statement references the "Preliminary Worksheet" and requests that the Subcommittee include the document in its proposed policy.

•Preliminary Worksheet on Chemicals for Consideration in Green Procurement revised 10/20/10. This document provides additional information that does not appear on the list distributed 10/12. The additional information consists of a legend indicating the source used when developing the column entitled "products/ingredients." This worksheet was circulated at the Advisory Council meeting on October 22, 2010 and circulated to Subcommittee members by email on 11/3/10.

These materials are annexed to this Report as appendices A through F.

The Advisory Council members who recommended the adoption of a list of chemicals to avoid expressed general agreement with the Subcommittee's proposal to refer to the Lists and Action Plans described in its draft document entitled, "Consideration of Chemicals in the Development of Green Specifications," and generally supported the approach described therein. However, the majority

expressed some disappointment that the Subcommittee's draft recommendation does not include the use of the word "avoid," nor does it include reference to a stand-alone worksheet of chemicals developed expressly for use with regard to EO 4, annexed hereto as Appendix F.

Steven Rosario of the NYS Chemical Alliance (Alliance), an Advisory Council member who opposed the Council's recommendation, supported the Subcommittee's language that clarified that the EO 4 approach with regard to chemicals should not be construed as a ban. However, the Alliance expressed the view that the federal government Lists and Action Plans identified as sources in the document are not appropriate for use in developing EO 4 specifications, because they were not developed for purposes that relate to state procurement. The Alliance also expressed its view that proper analysis of the risks presented by listed chemicals and any alternatives thereto must take into account a number of factors, including the tradeoffs presented by substitution of one constituent with another.

Subcommittee Response to Materials and Presentations

The Subcommittee has thoroughly considered the viewpoints and materials provided by the Advisory Council members summarized above, and has determined to present its proposal, entitled "Consideration of Chemicals in the Development of Green Specifications," to the Interagency Committee as written.

With regard to the concerns raised by the majority, the Subcommittee determined not to include the word "avoid" in its recommendation on chemicals, choosing instead to incorporate language taken directly from the Executive Order itself. The Subcommittee was concerned that, in performing its review of a listed chemical in a given item to be procured, it may determine that no viable alternative to a given chemical is currently available. In such a case, it is possible that certain chemicals may not be possible to avoid in all contexts. The recommendation affords the flexibility that may be required when developing specifications for items to be procured by state agencies and authorities with diverse missions.

The Advisory Council majority felt that the worksheet of chemicals it developed for use as a reference list should be incorporated into the Subcommittee's recommendation. The reference list is attached hereto as Appendix F. The Subcommittee agrees that the reference list may prove to be a useful tool when developing specifications. However, the Subcommittee preferred an approach that directly referenced source documents developed by the federal government. While the Subcommittee appreciates the effort that many Advisory Council members put into the creation of an abridged list of

chemicals, it was concerned that including the abridged list in its recommendation could lead to an erroneous perception that New York State has independently adopted its own list of chemicals to consider.

The Subcommittee gave due consideration to the concern raised by the Alliance, that the federal government Lists and Action Plans identified as sources in the document were not developed for purposes that relate to state procurement. The Subcommittee recognizes that the referenced federal government Lists and Action Plans were not developed strictly for purposes related to government procurement. However, the purposes underlying the referenced Lists and Action Plans bear a sufficient nexus to the purposes outlined in Executive Order 4, and the Lists and Action Plans may be useful as resources in the development of specifications that will adhere to the purposes of EO 4. The Subcommittee considered the stated purpose for EPA's Waste Minimization Priority Program, which "supports efforts that promote a more sustainable society, reduce the amounts of waste generated, and lower the toxicity and persistence of wastes that are generated." See epa.gov/osw/hazard/wastemin/index.htm. The Program "focuses its efforts on reducing 31 Priority Chemicals (PCs) found in our nation's products and wastes by finding ways to eliminate or substantially reduce their use in production." epa.gov/osw/hazard/wastemin/priority.htm. In addition, the Subcommittee considered that the U.S. Department of Health and Human Services National Toxicology Program's current List of Chemicals Known and Reasonably Anticipated to be Human Carcinogens in its "Report on Carcinogens," includes many substances that are widely distributed in commerce. Finally, chemicals for which EPA initiates Action Plans under the Toxic Substances Control Act, are chosen using the following criteria: "Chemicals identified as persistent, bioaccumulative, and toxic; High production volume chemicals; Chemicals in consumer products; Chemicals potentially of concern for children's health because of reproductive or developmental effects; Chemicals subject to review and potential action in international forums; Chemicals found in human biomonitoring programs; and Chemicals in categories generally identified as being of potential concern in the new chemicals program." See epa.gov/oppt/existingchemicals/pubs/ecactionpln.html.

The Subcommittee therefore believes it is advisable to use the Lists and Action Plans as resources, while giving due consideration to the purposes for which they were developed and any limitations that may inhere therein. The Subcommittee also expressly states that in developing EO 4 specifications, the Interagency Committee will not be limited to consideration of the Lists and Action Plans.

The Subcommittee has also considered the Alliance's position that mere presence of a chemical in a product or process does not evidence actual risk, and that proper analysis of the risks presented by listed chemicals and any alternatives thereto must take into account a number of factors, including the tradeoffs presented by substitution of one constituent with another. The Subcommittee's recommendation attempts to address these concerns when it acknowledges that "Depending on each commodity, service or technology, and whether sufficient alternatives exist in the marketplace, procurement specifications may restrict or allow considered chemicals to be used or contained in certain commodities, services or technologies." Moreover, the Subcommittee's decision to omit from its recommendation a commitment that it will "avoid" listed chemicals acknowledges that consideration of these substances and any alternatives must be undertaken prior to making a final determination.

For these reasons, the Subcommittee has determined to finalize its draft proposal without modification, and refer the proposal and this Report to the Interagency Committee for further action, as appropriate.

NEW YORK STATE
CHEMICAL ALLIANCE

October 14, 2010

TO: Anne Phillips, Co-Chair
EO 4 Sustainability and Green Procurement Subcommittee
New York State Office of General Services

The New York State Chemical Alliance appreciates having the opportunity to submit the following comments relevant to the Subcommittee's consideration of the EO4 Advisory Council's recommendation that it adopt a list of chemicals to avoid in products purchased by the State ("Green Procurement Chemical Avoidance List").

We offer the following points for the Subcommittee's consideration:

1. **The presence of a chemical in a product or process is not in of itself evidence of actual risk:**
We agree with the statement in the Subcommittee's draft statement on *Consideration of Chemicals in the Development of Green Specifications* that "the identification of chemicals to consider in green procurement should not be construed as a ban on the purchase of commodities, services or technology containing and/or using such chemicals."

This statement appropriately reflects the fact that the mere presence of a chemical as a constituent in a product or process is *not* evidence of any actual risk to human health or the environment, and therefore should not be the basis upon which procurement policies are established.

That said, the Subcommittee's draft then goes on to suggest that determining whether sufficient alternatives exist in the marketplace is a simple matter of applying procurement specifications that "may restrict or allow considered chemicals to be used or contained in certain commodities, services or technologies" (e.g. mercury in fluorescent lamps)."

Doesn't this sentence conflict with and undermine the first statement cited above?

2. **Alternatives analysis is not a simple exercise:**
Alternatives analysis should be driven by risk-based consideration of the chemical in its intended uses and the impact of that use in products and processes throughout the value chain. Alternatives analysis should not be driven solely by the principle of hazard alone or by the inclusion of a chemical on a list.

New York State Chemical Alliance
99 Washington Avenue, Suite 701 • Albany, New York 12210
(518) 426-9516 • FAX (518) 426-2276 | www.nyschemalliance.org

Chemical substitution (replacing one chemical with another) does not in of itself inherently make a safer product. There are always tradeoffs that must be judged in the context of life-cycle considerations.

Any consideration of alternatives analysis must include overall product performance, worker and consumer safety, health and environmental impacts, and the economic impacts associated with a potential alternative.

3. **Lists of chemicals developed for certain purposes should not be taken out of context for the purposes of procurement policy purposes:**
The EO4 Subcommittee's draft statement references existing lists of chemicals that were never intended to drive procurement policies. Instead, they were developed for various purposes such as waste minimization; science-based identification of potential carcinogens; or evaluation of potential risk management actions.

These lists were *not* designed to identify "chemicals of concern" in consumer products, processes, or technologies.

For example, the purpose of the U.S. EPA's Chemical Action Plans (CAPs) is to identify chemicals that EPA will evaluate to determine if existing regulatory and non-regulatory risk-management actions are appropriate from a health or environmental perspective. *This is all they are* – work plans outlining what the Agency will do to determine if any action is warranted. The EPA's Chemical Action Plans are *not* regulatory actions in of themselves, and do not reflect the agency's final regulatory assessment of a chemical.

Further, we continue to have concerns about the lack of transparency surrounding how chemicals were and will be selected for CAPs generally, and more specifically, with the approach taken in the CAPs themselves.

Transparency promotes accountability in a scientific dialogue that can instill confidence that the process and system employed is scientifically sound. We had hoped the EPA would publish detailed information regarding the criteria used to select the chemicals for CAPs, as well as the methodology used in the CAPs to determine whether and what further action might be warranted on any given chemical or category of chemicals. Unfortunately, neither has been made public since the release of the first four CAPs on December 30, 2009.

The criteria used to select the chemicals subject to CAPs describe factors that determined the selection of chemicals only in the vaguest of terms – none of which give a science-based indication that the chemicals pose a risk to either human health or the environment.

Specifically, the CAPs state that the EPA identified an initial list of "widely recognized chemicals" for action based on factors that vary and are rather imprecise. It is unclear what is meant by "widely recognized chemicals", and why mere recognition would be considered a legitimate scientific basis upon which to select a chemical for a Chemical Action Plan and possible regulatory action.

In addition, it is important for the EO4 Subcommittee to recognize that the EPA CAPs do not indicate what weight is accorded by that agency in its consideration of data, studies, and information. The EPA is required to provide a 'weight of evidence' analysis under its Data Quality Act obligations, and that weight of evidence assessment should be clearly stated so that stakeholders and the scientific community can evaluate and comment constructively on both the proposed approach, and EPA's basis for that approach.

Unfortunately, to date, stakeholders have not been provided any evidentiary analysis nor have they been enlisted to provide EPA any information to inform that agency's evaluation of chemicals for the CAPs.

For all of these reasons, the NYS Chemical Alliance believes that relying on the list of chemicals chosen for the EPA's Chemical Action Plans (CAPs) as an abridged method of identifying chemicals to be targeted for possible exclusion under New York's Development of Green Procurement Specifications is inappropriate.

Center for Health, Environment & Justice ■ Grassroots Environmental Education ■ Great Neck Breast Cancer Coalition ■ Huntington Breast Cancer Action Coalition ■ Prevention Is The Cure ■ Western NY Council on Occupational Safety & Health

Anne Phillips
Co-Chair
EO 4 Sustainability and Green Procurement Subcommittee
New York State Office of General Services
Corning Tower
41st Floor
Empire State Plaza
Albany, NY 12242

October 6, 2010

Dear Ms. Phillips,

We are writing to support the EO 4 Interagency Committee on Sustainability and Green Procurement's proposed recommendation titled "Consideration of Chemicals in the Development of Green Specifications." We also are providing additional information on some of the referenced chemicals in the attached Memorandum which summarizes recent studies and government actions in the last six months on Bisphenol-A, PFOA and PBDE.

As members of the Sustainability and Green Procurement Advisory Council, we appreciate that the Interagency Committee has moved forward on the Council's Chemical Avoidance List recommendation which was overwhelmingly approved by the Council. This revised recommendation will ultimately help to better protect the state's environment and public health and appropriately implements the goals and objectives of EO 4.

We are disappointed that the revised recommendation has taken out the Advisory Council's recommendation language that the identified chemicals are to be avoided in state procurement practices. However, we realize that the intent of the revised recommendation is clearly avoid purchasing products, services and technologies that contain the identified chemicals where possible. We support this revised recommendation as it meets the goals and objectives embodied in the Advisory Council's recommendation.

We appreciate that the revised recommendation includes the following goals of EO 4: "to reduce or eliminate the health and environmental risks from the use or release of toxic substances; minimize risks of the discharge of pollutants into the environment; minimize the toxicity of packaging; protect public health and the environment, including children; and embody pollution prevention and sustainable production."

We strongly support the inclusion of all the chemicals identified in the revised recommendation, including the references to chemicals found in the U.S. Environmental Protection Agency (EPA) Waste Minimization Priority List, U.S. Department of Health and Human Services National Toxicology Program Report on Carcinogens, List of Chemicals Known and Reasonably Anticipated to be Human Carcinogens, and the EPA in Action Plans being implemented under TSCA.

Patti Wood and Anne Rabe plan to attend the October 14th EO 4 Sustainability and Green Procurement Subcommittee meeting. We would appreciate receiving information on the location of the meeting and the meeting format and agenda.

Thank you.

Sincerely,

Lois Gibbs, Executive Director
Anne Rabe, Campaign Coordinator
Center for Health, Environment & Justice
Castleton, NY

Patti Wood
Grassroots Environmental Education
Port Washington, NY

Laura Weinberg
Great Neck Breast Cancer Coalition
Great Neck, NY

Karen Miller
Huntington Breast Cancer Action Coalition
Prevention Is The Cure, Inc.
Huntington, NY

Roger Cook
Western NY Council on Occupational Safety & Health
Buffalo, NY

Updated Summary of Recent Research on Chemicals on the Chemical Avoidance List Recommended by the EO4 Advisory Council

October 2010

In May of 2010, the President's Cancer Panel reported that "the true burden of environmentally induced cancers has been grossly underestimated" and strongly urged action to reduce people's widespread exposure to carcinogens. The panel advised President Obama "to use the power of your office to remove the carcinogens and other toxins from our food, water, and air that needlessly increase health care costs, cripple our nation's productivity, and devastate American lives."

The panel wrote, "The prevailing regulatory approach in the United States is reactionary rather than precautionary. That is, instead of taking preventive action when uncertainty exists about the potential harm a chemical or other environmental contaminant may cause, a hazard must be incontrovertibly demonstrated before action to ameliorate it is initiated. Moreover, instead of requiring industry or other proponents of specific chemicals, devices, or activities to prove their safety, the public bears the burden of proving that a given environmental exposure is harmful."

We present this additional updated information in support of the Interagency Committee approving the EO4 recommendation on avoiding identified chemicals, known as the Chemical Avoidance List recommendation that was approved by the overwhelming majority of the Advisory Council.

Bisphenol-A

Bisphenol-A, or "BPA" is a common component of plastics, including those used to contain food. Discovered in the 1890s, BPA is a type of estrogen that has become ubiquitous in the environment because of its widespread use.

• In February, 2010, a study published in the Journal of the Federation of American Societies for Experimental Biology suggested that exposure to BPA during pregnancy leads to epigenetic changes that may cause permanent reproduction problems for female offspring.

> " Exposure to BPA may be harmful during pregnancy; this exposure may permanently affect the fetus," said Hugh S. Taylor, Ph.D., co-author of the study from Yale University School of Medicine in New Haven, Connecticut. "We need to better identify the effects of environmental contaminants on not just crude measures such as birth defects, but also their effect in causing more subtle developmental errors."

• In March, the U. S. Environmental Protection Agency declared BPA to be a "chemical of concern."

• In the spring of 2010, the University of Missouri Division of Biological Sciences laboratory investigated the BPA content on cash register receipts. The scientists found that the total mass of BPA on a receipt is 250 to 1,000 times greater than the amount of BPA typically found in a can of food or a can of baby formula, or that which leaches from a BPA-based plastic baby bottle into its contents. In July, 2010, Swiss researchers report that BPA transfers readily from paper receipts to skin and can penetrate the skin to such a depth that it cannot be washed off. This raises the possibility that the chemical infiltrates the skin's lower layers to enter the bloodstream directly. BPA has also been shown to penetrate skin in laboratory studies.

• In August, the Centers For Disease Control's National Center for Environmental Health issued its "Fourth National Report of Human Exposure to Environmental Chemicals." The report included, for the first time, data on BPA. The authors wrote:

> "Bisphenol A (BPA), a component of epoxy resins and polycarbonates, may have potential reproductive toxicity. General population exposure to BPA may occur through ingestion of foods in contact with BPA-containing materials. CDC scientists found bisphenol A in more than 90% of the urine samples representative of the U.S. population."

• Also that month, in one of the first human studies of its kind, researchers found that urinary concentrations of BPA may be related to decreased sperm quality and sperm concentration.

> The study, published online in the journal *Reproductive Toxicology*, suggested that more research should focus on BPA and health effects in adults. The primary author was John Meeker, assistant professor of Environmental Health Sciences at the University of Michigan School of Public Health.

• Another study published in August in the journal *Biology of Reproduction* found that exposure of pregnant female mice to BPA may produce adverse reproductive consequences on gene expression in fetal ovaries as early as 12 hours after the mother has first been exposed to the chemical.

> The mice in this study were given BPA at doses thought to be equivalent to levels currently being experienced by humans. The research, conducted in the laboratory of Dr. Patricia A. Hunt at Washington State University (WSU) in Pullman, showed that BPA exposure affects the

earliest stages of egg production in the ovaries of the developing mouse fetuses, thus suggesting that the next generation (the grandchildren of the females given BPA) may suffer genetic defects in such biological processes as mitosis and DNA replication.

• In September, researchers posited that exposure to BPA is actually much greater than previously thought, and its authors urged the federal government to act quickly to regulate the chemical that is in baby bottles, food-storage containers and many household products. The peer-reviewed study, published Sept. 20 in the online NIH journal Environmental Health Perspectives, also says BPA exposure is likely coming from many sources--including some still unknown.

Worldwide regulatory action on BPA:

• Denmark has banned BPA in materials that come into contact with food and beverages

• France has banned baby bottles containing BPA

• Canada will add BPA to its toxic substances list under the Canadian Environmental Protection Act by the end of this year.

The following states and municipalities have banned the sale of baby bottles containing BPA:

Maryland
Connecticut
Minnesota
Washington
Vermont
Wisconsin
New York (effective December 2010)

Perfluorooctanoic acid (PFOA)

PFOA is a persistent organic chemical used in industrial and consumer goods including nonstick cookware and stain- and water-resistant coatings for carpets and fabrics.

• In January, 2010, a study by the University of Exeter and the Peninsula Medical School for the first time links thyroid disease with human exposure to perfluorooctanoic acid (PFOA). Published in the journal *Environmental Health Perspectives*, the study revealed that people with higher concentrations of PFOA in their blood have higher rates of thyroid disease. The researchers analyzed samples from the US Centers for Disease Control and Prevention's nationally representative National Health and Nutrition Examination Survey (NHANES).

• In August, the CDC's National Center for Environmental Health also addressed PFOA in issued its "*Fourth National Report of Human Exposure to Environmental Chemicals*." The authors wrote:

> "Another example of widespread human exposure included several of the perfluorinated chemicals. One of these chemicals, perfluorooctanoic acid (PFOA), was a byproduct of the synthesis of other perfluorinated chemicals and was a synthesis aid in the manufacture of a commonly used polymer, polytetrafluoroethylene, which is used to create heat-resistant non-stick coatings in cookware. Most participants had measurable levels of this environmental contaminant.

• In September, a new study from researchers at the West Virginia University School of Medicine suggested that chemicals used to create non-stick coatings on cookware could be causing an increase in the cholesterol levels of children.

> For the study, researchers tested the levels of PFOA and perfluoroctanesulfonate (PFOS) in 12,000 Ohio and West Virginia children. These chemicals are the same as those for non-stick coatings. The results showed that the kids with highest PFOA and PFOS levels also had the highest cholesterol levels.

Polybrominated diphenyl ethers (PBDE)

Polybrominated diphenyl ethers are fire retardants used in certain manufactured products.

• In June, a new study suggested that flame-retardant chemicals (PBDEs) might be making it more difficult for women to get pregnant. Researchers studied PBDE blood levels in 223 pregnant women and asked how long it took them to conceive. The team found that those with high levels were up to 50 percent less likely to get pregnant in a given month than women with lower levels. According to the study, nearly all Americans (97 percent) have PBDEs at detectable levels in their blood.

• The CDC's *Fourth National Report on Human Exposure to Environmental Chemicals,* issued in August, looked for levels of PBDE in the population for the first time. They confirmed earlier reports, writing:

> [PBDEs] accumulate in the environment and in human fat tissue. One type of polybrominated diphenyl ether, BDE-47, was found in the serum of nearly all of the [study] participants.

• In September, a study led by researchers at the University of California, Berkeley found that pregnant women with higher blood levels of PBDE had

altered thyroid hormone levels, a result that could have implications for fetal health.

> "This is the first study with a sufficient sample size to evaluate the association between PBDE flame retardants and thyroid function in pregnant women," said the study's lead author, Jonathan Chevrier, a UC Berkeley researcher in epidemiology and in environmental health sciences. "Normal maternal thyroid hormone levels are essential for normal fetal growth and brain development, so our findings could have significant public health implications. These results suggest that a closer examination between PBDEs and these outcomes is needed."

Patti Wood

10/3/2010

October 12, 2010

Anne Phillips
Co-Chair, EO4 Sustainability and Green Procurement Subcommittee
New York State Office of General Services
Corning Tower
41st Floor
Empire State Plaza
Albany, NY 12242

Dear Ms. Phillips.

Further to our letter of October 6th, we would like to offer the following additional comments.

First, we would like to reiterate our appreciation and acknowledge the good work of the Subcommittee in developing their proposed policy, "Consideration of Chemicals in the Development of Green Specifications." We strongly support the Subcommittee in their desire to help achieve the EO 4 goals of "eliminating the health and environmental risks from the use or release of toxic substances."

During our deliberations on this issue, some EO 4 Advisory Council members consulted with leading experts in the emerging field of green purchasing, and worked diligently with them to identify chemicals that are found in products commonly purchased by the state agencies. A document was created with contextual information that may be of value to the Subcommittee when they undertake the task of writing specifications. All the chemicals in this document are included on one or more of the federal lists referenced in your draft recommendation. A copy is attached for your reference, entitled "Preliminary Worksheet on Chemicals for Consideration in Green Procurement."

In response to the Committee's stated willingness to "consider additional information that can be obtained with reasonable effort," we respectfully request that this document be included as an addition to the existing references.

Patti Wood and Anne Rabe look forward to joining you at the EO4 Sustainability and Green Procurement Subcommittee meeting this Thursday, the 14th of October.

Thank you.

Sincerely,

Lois Gibbs, Executive Director
Anne Rabe, Campaign Coordinator
Center for Health, Environment & Justice
Castleton, NY

Patti Wood, Executive Director
Grassroots Environmental Education
Port Washington, NY

Roger Cook
Western NY Council on Occupational Safety and Health
Buffalo, NY

Laura Weinberg
Great Neck Breast Cancer Coalition
Great Neck, NY

Karen Miller
Huntington Breast Cancer Action Coalition
Prevention is the Cure, Inc.
Huntington, NY

Scot M. Case
Vice President
TerraChoice Environmental Marketing
Reading, PA

Preliminary Worksheet on Chemicals for Consideration in Green Procurement

Chemical	Concern	List	Products/Ingredients
1,2-Dichloroethane	RA	NTP	Adhesives, building supplies
1,2,3, Trichloropropane	RA	NTP	Chemical solvent
1,2,4-Trichlorobenzene	PBT	EPA	Degreasers, lubricants, solvents
1,2,4,5-Tetrachnolorobenzene	PBT	EPA	Intermediate to make pesticides
1,3 Dichloropropene	RA	NTP	Pesticide
1,4 Dioxane	RA	NTP	Varnish stripper, by-product of surfactants
1,4-Dichlorobenzene (para-dichlorobenzene)	RA	NTP	Urinal blocks, deodorizers
2,2 bis(Bromoethyl) 1,3 propanediol,	RA	NTP	Flame retardant
2,3 Dibromo-1-propanol	RA	NTP	Polyurethane foam
2,3,7,8-Tetrachlorodibenzo-p-dioxin	KHC	NTP	Chlorine-bleached paper products
2,4,5-Trichlorophenol	PBT	EPA	Fungicide, herbicide
3-Chloro-2-methylpropene	RA	NTP	Pesticide
4-Bromophenyl phenyl ether	PBT	EPA	Former flame retardant
Acenaphthene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust
Acenaphthylene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust
Acetaldehyde	KHC	NTP	Adhesives
Amitrole	RA	NTP	Pesticide
Arsenic compounds, Inorganic	KHC	NTP	Wood preservative, treated wood
Asbestos	KHC	NTP	Roofing shingles, siding
Benzene	KHC	NTP	Contaminant of solvents
Benzo (g,h,i) perylene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust
Beryllium and beryllium compounds	KHC	NTP	Cell phones
Bis (Chloromethyl) Ether, Technical Grade Chloromethyl Methyl Ether	KHC	NTP	Cleaning products
Bisphenol A		EPA CAP	Bottles, food packaging
Cadmium and cadmium compounds	KHC, PBT	EPA, NTP	Pigments, batteries, plastics, products containing flyash, stabilizer for PVC
Carbon tetrachloride	RA	NTP	Cleaning solvent, adhesive, adhesive remover
Ceramic fibers	RA	NTP	Fiber board insulation
Chloroprene	RA	NTP	Glues, adhesives
Chromium, hexavelent	KHC	NTP	Contaminent, possibly in leather
Coal tar and pitches	KHC	NTP	Road patching and paving material, roofing material
Di(2-ethylhexyl) phthalate (DEHP)	RA	NTP	PVC building supplies, office supplies
Dibenzofuran	PBT	EPA	Coal tar-based products, products containing flyash, coke dust
Dichloromethane (Methylene chloride)	RA	NTP	Graffiti removers, paint strippers, lubricants
Diesel exhaust particulates	RA	NTP	Buses, trucks, power generators
Diethyl Sulfate	RA	NTP	Carbonless paper

Preliminary Worksheet on Chemicals for Consideration in Green Procurement

Dioxins and furans (polychlorinated)	PBT	EPA	Generated from the manufacture and incineration of chlorinated paper products, solvents, pesticides, plastics
Endosulfan	PBT	EPA	Insecticide, wood preservative (not made in the U.S.)
Ethylene dichloride (1,2 Dichloroethane)	RA	NTP	Adhesives, caulking
Ethylene oxide	KHC	NTP	Hospital-grade sterilant, fungicide
Fluorene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust
Formaldehyde gas	RA	NTP	Carpet, tile, glues, adhesives, caulking, particle board, furntiture
Furan	RA	NTP	Wood preservative, asphalt and patching material, roofing patch, resins
Glass Wool	RA	NTP	Thermal, electrical and acoustical insulation
Heptachlor; heptachlor epoxide	PBT	EPA	Banned pesticide.
Hexachlorobenzene	PBT, RA	EPA, NTP	Banned pesticide, contaminant of products containing chlorinated organics
Hexachlorobutadiene	PBT	EPA	Contaminant in the manufacture of rubber
Hexachlorocyclohexane, gamma (Lindane)	PBT	EPA	Pesticide used to control lice and scabies in humans and animals
Hexachloroethane	PBT, RA	EPA, NTP	Artificial smoke, munitions, lubricants, byproduct of incineration of chlorinated products
Hexamethylphophoramide	RA	NTP	Rodenticide
Lead and lead compounds	PBT, RA	NTP	Batteries, light bulbs, appliances, computers, products containing flyash, cell phones, other electronics, PVC (pigment/stabilizer)
Lindane and other hexachlorocyclohexane Isomers	RA	NTP	Pesticide used to control lice and scabies in humans and animals
Mercury	PBT	EPA	Light bulbs, appliances, computers, products containing flyash, thermometers, thermostats
Methoxychlor	PBT	EPA	Insecticide
Methylene Chloride	RA	NTP	Chemical solvent, paint stripper, printing inks, automotive degreasing
Mineral oils (untreated and mildly treated)	KHC	NTP	Lubricants
Naphthalene	PBT, RA	EPA, NTP	Mothballs, dyes, leather goods, insecticides, wood preservatives, coal tar-based products
Nickel (metallic)	RA	NTP	Batteries
Nickel compounds	KHC	NTP	Electroplated items
Nitromethane	RA	NTP	Chemical solvent
Nitropropane	RA	NTP	Solvent for inks, paints and varnishes
Nitrosodimethylamine	RA	NTP	Control of nematodes
PBDEs (Octa, penta and deca)		EPA CAP	Furniture, carpeting, computers, other electrical equipment
Pendimethalin	PBT	EPA	Herbicide (used on rights-of-way)
Pentachlorobenzene	PBT	EPA	Used to make the fungicide pentachloronitrobenzene (PCNB)

Preliminary Worksheet on Chemicals for Consideration in Green Procurement

Pentachloronitrobenzene	PBT	EPA	Fungicide (used as lawn chemical and to prevent slime in industrial water tanks)
Pentachlorophenol	PBT	EPA	Wood preservative used on powerline poles, railroad tracks, fences
PFOS and PFOA		EPA CAP	Fabrics, paper, cookware, floor polishes
Phenanthrene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust
Polybrominated biphenyls (PBBs)	RA	NTP	Brominated flame retardant banned in the U.S. in the1970s. May still be in imported products.
Polychlorinated biphenyls (PCBs)	RA, PBT	NTP, EPA	Banned in the U.S. but may still be contaminant of some manufacturing processes.
Polycyclic aromatic hydrocarbons (PAHs)	PBT, RA	EPA, NTP	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust
Propylene oxide	RA	NTP	Glues, adhesives, caulking
Pyrene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust
Selenium sulfide	RA	NTP	Fungicide
Silica, Crystalline (respirable size)	KHC	NTP	Paint, primers, cleaning products
Tetrachloroethylene (Perchloroethylene)	RA	NTP	Solvents (including dry cleaning), degreasers, graffiti removers, paint strippers, lubricants
Tetrafluoroethylene	RA	NTP	Used in the production of Teflon
Toluene Diisocyanate	RA	NTP	Floor and wood finishes
Trichloroethylene	RA	NTP	Solvents, degreasers, graffiti removers, paint strippers, lubricants, carpet and upholstery cleaners
Trifluralin	PBT	EPA	Herbicide (used on rights-of-way)
Tris (2,3 Dibromopropyl) phosphate	RA	NTP	Flame retardant found in upholstery
Urethane	RA	NTP	Sealants
Vinyl chloride	KHC	NTP	Siding, piping, roofing, carpet, wall paper, shower curtains
Vinyl fluoride	RA	NTP	Wall, pipe and electrical covering

Legend:

KHC = Known Human Carcinogen, RA = Reasonably Anticipated to be a Human Carcinogen, PBT = Persistent Bio-accumulative Toxin

EPA = EPA Waste Minimization Priority, EPA CAP = EPA Chemical Action Plans, NTP = National Toxicology Program 11th Report

This list was prepared for the consideration of the EO 4 Procurement Subcommittee by members of the EO4 Advisory Council.

REV. 10/15/10

October 14, 2010
Albany - EO4 Interagency Subcommittee Meeting on Green Procurement

Thank you for the opportunity to speak this morning on behalf of the EO4 Advisory Council. Today I am speaking for myself and several other members of the council who could not be here today. Last night before I left my office I got a call from one member of the council, Scot Case, Vice President of TerraChoice Environmental Marketing, who is currently presenting at the *International Green Technology and Purchasing Conference* in Kuala Lumpur in Malaysia. He joins us in support of your proposed recommendation to consider certain chemicals in green purchasing and will be citing some of New York State's other green initiatives in his presentation on North American Strategies.

The chemicals that your committee has identified for consideration in the development of green specifications have been identified and thoroughly researched by multiple federal agencies and determined to be detrimental to either or both human health and the environment. We applaud your committee for making this effort, joining other states and cities across the country (notably Maine, Los Angeles, New York City, San Francisco, New Jersey and Washington state) who have already enacted similar initiatives and for encouraging others to follow. You will also most certainly be playing a role in advancing green technology industries and creating new markets as well as new jobs.

During our deliberations on this issue, a working group of EO 4 Advisory Council members consulted with leading experts in the emerging field of green purchasing, and worked diligently to identify chemicals that are found in products commonly purchased by the state agencies. A working document was created with contextual information that may be of value to the Subcommittee when undertaking the task of writing specifications. Of course, all the chemicals in this document are included on one or more of the federal lists referenced in your proposed recommendation. We would appreciate the Committee's consideration of the inclusion of this document in your proposed policy.

As an organization that prioritizes the protection of the public's health, especially our children, once again I support you in your decision to carefully consider those chemicals which present the greatest risk to people and the environment. Thank you.

Patti Wood
Executive Director
Grassroots Environmental Education
52 Main Street
Port Washington, NY 11050
516-883-0887
pjw@grassrootsinfo.org

Preliminary Worksheet on Chemicals for Consideration in Green Procurement

Chemical	Concern	List	Products/Ingredients
1,2-Dichloroethane	RA	NTP	Adhesives, building supplies[¥]
1,2,3, Trichloropropane	RA	NTP	Chemical solvent[¥]
1,2,4-Trichlorobenzene	PBT	EPA	Degreasers, lubricants, solvents[†]
1,2,4,5-Tetrachlorobenzene	PBT	EPA	Intermediate to make pesticides[†]
1,3 Dichloropropene	RA	NTP	Pesticide[¥]
1,4 Dioxane	RA	NTP	Varnish stripper, by-product of surfactants[¥]
1,4-Dichlorobenzene (para-dichlorobenzene)	RA	NTP	Urinal blocks, deodorizers[¥]
2,2 bis(Bromoethyl) 1,3 propanediol	RA	NTP	Flame retardant[¥]
2,3 Dibromo-1-propanol	RA	NTP	Polyurethane foam[¥]
2,3,7,8-Tetrachlorodibenzo-p-dioxin	KHC	NTP	Chlorine-bleached paper products[¥]
2,4,5-Trichlorophenol	PBT	EPA	Fungicide, herbicide[†]
3-Chloro-2-methylpropene	RA	NTP	Pesticide[¥]
4-Bromophenyl phenyl ether	PBT	EPA	Former flame retardant[†]
Acenaphthene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust[†]
Acenaphthylene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust[†]
Acetaldehyde	KHC	NTP	Adhesives[¥]
Amitrole	RA	NTP	Pesticide[¥]
Arsenic compounds, Inorganic	KHC	NTP	Wood preservative, treated wood[¥]
Asbestos	KHC	NTP	Roofing shingles, siding[¥]
Benzene	KHC	NTP	Contaminant of solvents[¥]
Benzo (g,h,i) perylene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust[†]
Beryllium and beryllium compounds	KHC	NTP	Cell phones[¥]
Bis (Chloromethyl) Ether, Technical Grade Chloromethyl Methyl Ether	KHC	NTP	Cleaning products[¥]
Bisphenol A		EPA CAP	Bottles, food packaging[Δ]
Cadmium and cadmium compounds	KHC, PBT	EPA, NTP	Pigments, batteries, plastics, products containing fly ash, stabilizer for PVC[¥†]
Carbon tetrachloride	RA	NTP	Cleaning solvent, adhesive, adhesive remover[¥]
Ceramic fibers	RA	NTP	Fiber board insulation[¥]
Chloroprene	RA	NTP	Glues, adhesives[¥]
Chromium, hexavalent	KHC	NTP	Contaminant, possibly in leather[¥]
Coal tar and pitches	KHC	NTP	Road patching and paving material, roofing material[¥]
Di(2-ethylhexyl) phthalate (DEHP)	RA	NTP	PVC building supplies, office supplies[¥]
Dibenzofuran	PBT	EPA	Coal tar-based products, products containing fly ash, coke dust[†]
Dichloromethane (Methylene chloride)	RA	NTP	Graffiti removers, paint strippers, lubricants[¥]
Diesel exhaust particulates	RA	NTP	Buses, trucks, power generators[¥]
Diethyl Sulfate	RA	NTP	Carbonless paper[¥]

Preliminary Worksheet on Chemicals for Consideration in Green Procurement

Dioxins and furans (polychlorinated)	PBT	EPA	Generated from the manufacture and incineration of chlorinated paper products, solvents, pesticides, plastics†
Endosulfan	PBT	EPA	Insecticide, wood preservative (not made in the U.S.)†
Ethylene dichloride (1,2 Dichloroethane)	RA	NTP	Adhesives, caulking¥
Ethylene oxide	KHC	NTP	Hospital-grade sterilant, fungicide¥
Fluorene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust†
Formaldehyde gas	RA	NTP	Carpet, tile, glues, adhesives, caulking, particle board, furniture¥
Furan	RA	NTP	Wood preservative, asphalt and patching material, roofing patch, resins¥
Glass Wool	RA	NTP	Thermal, electrical and acoustical insulation¥
Heptachlor; heptachlor epoxide	PBT	EPA	Banned pesticide†
Hexachlorobenzene	PBT, RA	EPA, NTP	Banned pesticide, contaminant of products containing chlorinated organics¥†
Hexachlorobutadiene	PBT	EPA	Contaminant in the manufacture of rubber†
Hexachlorocyclohexane, gamma (Lindane)	PBT	EPA	Pesticide used to control lice and scabies in humans and animals†
Hexachloroethane	PBT, RA	EPA, NTP	Artificial smoke, munitions, lubricants, by-product of incineration of chlorinated products¥†
Hexamethylphosphoramide	RA	NTP	Rodenticide¥
Lead and lead compounds	PBT, RA	EPA, NTP	Batteries, light bulbs, appliances, computers, products containing fly ash, cell phones, other electronics, PVC (pigment/stabilizer)¥†
Lindane and other hexachlorocyclohexane Isomers	RA	NTP	Pesticide used to control lice and scabies in humans and animals¥
Mercury	PBT	EPA	Light bulbs, appliances, computers, products containing fly ash, thermometers, thermostats†
Methoxychlor	PBT	EPA	Insecticide†
Methylene Chloride	RA	NTP	Chemical solvent, paint stripper, printing inks, automotive degreasing¥
Mineral oils (untreated and mildly treated)	KHC	NTP	Lubricants¥
Naphthalene	PBT, RA	EPA, NTP	Mothballs, dyes, leather goods, insecticides, wood preservatives, coal tar-based products¥†
Nickel (metallic)	RA	NTP	Batteries¥
Nickel compounds	KHC	NTP	Electroplated items¥
Nitromethane	RA	NTP	Chemical solvent¥
Nitropropane	RA	NTP	Solvent for inks, paints and varnishes¥
Nitrosodimethylamine	RA	NTP	Control of nematodes¥
PBDEs (octa, penta and deca)		EPA CAP	Furniture, carpeting, computers, other electrical equipment∆
Pendimethalin	PBT	EPA	Herbicide (used on rights-of-way)†
Pentachlorobenzene	PBT	EPA	Fire retardant, used to make the fungicide pentachloronitrobenzene (PCNB)†

Preliminary Worksheet on Chemicals for Consideration in Green Procurement

Pentachloronitrobenzene	PBT	EPA	Fungicide (used as lawn chemical and to prevent slime in industrial water tanks)†
Pentachlorophenol	PBT	EPA	Wood preservative used on power line poles, railroad tracks, fences†
PFOS and PFOA		EPA CAP	Fabrics, paper, cookware, electronics, floor polishes∆
Phenanthrene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust†
Polybrominated biphenyls (PBBs)	RA	NTP	Brominated flame retardant banned in the U.S. in the 1970s. May still be in imported products.¥
Polychlorinated biphenyls (PCBs)	RA, PBT	NTP, EPA	Banned in the U.S. but may still be contaminant of some manufacturing processes.¥†
Polycyclic aromatic hydrocarbons (PAHs)	PBT, RA	EPA, NTP	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust¥†
Propylene oxide	RA	NTP	Glues, adhesives, caulking¥
Pyrene	PBT	EPA	PAH, used to make dyes, plastics, pesticides, wood preservatives (creosote, coal tar, roofing tar), auto exhaust†
Selenium sulfide	RA	NTP	Fungicide¥
Silica, Crystalline (respirable size)	KHC	NTP	Paint, primers, cleaning products ¥
Tetrachloroethylene (Perchloroethylene)	RA	NTP	Solvents (including dry cleaning), degreasers, graffiti removers, paint strippers, lubricants¥
Tetrafluoroethylene	RA	NTP	Used in the production of Teflon¥
Toluene Diisocyanate	RA	NTP	Floor and wood finishes¥
Trichloroethylene	RA	NTP	Solvents, degreasers, graffiti removers, paint strippers, lubricants, carpet and upholstery cleaners¥
Trifluralin	PBT	EPA	Herbicide (used on rights-of-way)†
Tris (2,3 Dibromopropyl) phosphate	RA	NTP	Flame retardant found in upholstery¥
Urethane	RA	NTP	Sealants¥
Vinyl chloride	KHC	NTP	Siding, piping, roofing, carpet, wall paper, shower curtains¥
Vinyl fluoride	RA	NTP	Wall, pipe and electrical covering¥

Legend:

KHC = Known Human Carcinogen, RA = Reasonably Anticipated to be a Human Carcinogen, PBT = Persistent Bio-accumulative Toxin

EPA = EPA Waste Minimization Priority, EPA CAP = EPA Chemical Action Plans, NTP = National Toxicology Program 11th Report

† = from EPA Waste Minimization Priority Fact Sheet, ∆ = from EPA Chemical Action Plan, ¥ = from NTP Substance Profile and/or NTP Report on Carcinogens Background Document

This list was prepared for the consideration of the EO 4 Procurement Subcommittee by members of the EO4 Advisory Council.

Corrected 11/30/10