

THE SAN ANTONIO STATEMENT ON BROMINATED AND CHLORINATED FLAME RETARDANTS: IMPACTS AND POTENTIAL POLICY INFLUENCE

Daley RE¹, Blum A^{1,2}, DiGangi J³, Mortimer D⁴, Lucas D⁵, Schecter A⁶, Scheringer M⁷, Shaw S⁸, de Wit C⁹

¹Green Science Policy Institute, 1492 Olympus Avenue, Berkeley, California, USA; ²Department of Chemistry, University of California, Berkeley, California, USA; ³International POPs Elimination Network, USA; ⁴Food Standards Agency, London, UK; ⁵Lawrence Berkeley National Laboratory, Berkeley, California, USA; ⁶University of Texas School of Public Health, Dallas, Texas, USA; ⁷Institute for Chemical and Bioengineering, ETH Zürich, Zürich, Switzerland; ⁸Marine Environmental Research Institute, Blue Hill, Maine, USA; ⁹Department of Applied Environmental Science, Stockholm University, Stockholm, Sweden

Introduction:

The San Antonio Statement on Brominated and Chlorinated Flame Retardants¹ is a consensus statement that documents health and environmental harm and, in some applications such as furniture foam, the lack of fire safety benefit from the use of brominated and chlorinated flame retardant chemicals (BFRs and CFRs). This statement, signed by more than 220 scientists and physicians from 30 countries, was published in the December 2010 *Environmental Health Perspectives*. The statement was developed and coordinated by the International POPs Elimination Network, the Green Science Policy Institute, and the International Panel on Chemical Pollution and introduced at the 30th International Symposium on Halogenated Persistent Organic Pollutants held in San Antonio, Texas in August 2010. The statement documents the properties of this class of chemicals and a continuing pattern of unfortunate substitution. When an organohalogen flame retardant is banned or phased out, another in the same family is often the replacement. The Statement supports the development of safer alternative chemicals and changes in the design of products to achieve fire safety without added organohalogen chemicals.

Materials and methods:

The authors first review the main points covered by the San Antonio Statement and describe the population of signatories. The authors then discuss the impacts of the Statement by discussing its citation in the peer-reviewed scientific literature and how it has been used to support legislation both in the United States and internationally)

Results and discussion:

1. Review of the San Antonio Statement's Points of Agreement and Signatories

The consensus statement asserts that many commonly used brominated and chlorinated flame retardants are semi-volatile and are released into indoor and outdoor environments from a variety of products. They can undergo long-range transport, are persistent and bioaccumulative (leading to food chain contamination), lack adequate toxicity information, do not have a proven overall fire safety benefit in some cases, increase fire toxicity which is a leading cause of fire deaths, and produce toxic dioxins and furans when burned. With agreement on these assertions, the signatories together suggest improved labeling information on flame retardants in products, increased public information for consumers, innovative changes in product designs or processes to avoid need for chemical flame retardant additives, the destruction of persistent organic pollutant content of products before their disposal, avoiding the transportation of waste containing persistent flame retardant chemicals across international boundaries unless it is for proper disposal, and the consideration of product stewardship and extended producer responsibility in the life-cycle management of products containing flame retardants.

The 220 signatories represent a range of fields and are from 30 countries. Most are professors or research scientists representing the natural sciences (including biology and chemistry, environmental science, oceanography), the health sciences (including medicine, public health, toxicology), civil and environmental engineering, and sociology. Other signatories included physicians, architects, local government officials, and laboratory managers.

2. Reference in Peer-Reviewed Literature

Since its publication, the San Antonio Statement has been referenced in three peer-reviewed research articles and one commentary. The first research article, "Is decabromodiphenyl ether (BDE-209) a developmental neurotoxicant?" by Costa and Giordano, was published in the January 2011 issue of *NeuroToxicology*². The article reviews human levels of BDE-209 and animal and its developmental neurotoxicity. The second article, "Childhood Obesity and Environmental Chemicals" by La Merrill and Birnbaum (January/February 2011, *Mount Sinai Journal of Medicine*) reviews evidence that organochlorines and other chemicals are risk factors for obesity³. The most recent research article, "Lessons Learned from Flame Retardant Use and Regulation Could Enhance Future Control of Potentially Hazardous Chemicals" by Brown and Cordner, was published in the May 2011 issue of *Health Affairs*⁴. The authors present a literature review and interviews with stakeholders. They concluded that the early warnings of health hazards from halogenated flame retardants were adequately not considered by decision makers considering increased flammability requirements. They recommend policy changes applicable to oversight of chemicals in general: examining classes of chemicals rather than individual ones, assessing alternative methods and materials, product labeling, and stronger regulation. A commentary entitled "Product Biomonitoring and Responsible Reporting" by Jung was published in the February 2011 *Environmental Health Perspectives*⁵. The piece questions the lack of regulatory action around the presence of PBDEs in food products.

3. Reference in Legislative Dialogue

The San Antonio Statement was highlighted at Maine legislative hearings to repeal the Kids Safe Products Act. The document educated key legislators and countered chemical industry lobbyists. The Statement is also cited as support for California's pending Senate Bill 147 ("The Consumer Choice Fire Safety Act"), which will modify the outdated California furniture flammability standard that is a major driver for the use of flame retardants such as pentaBDE in furniture and baby products. MomsRising and Physicians for Social Responsibility-Los Angeles and other non-governmental organizations have mentioned the San Antonio Statement in their literature supporting SB 147. Internationally, the Statement was used extensively during the recent Restriction of Hazardous Substances (RoHS) revision period in the European Union. It was sent to all members of the Environmental Committee in the Parliament, all member state representatives in the European Union, and all companies in contact with RoHS.

Conclusion:

The San Antonio Statement can be used to support legislation, regulations and standards that provide fire safety without the addition of toxic or untested organohalogen chemicals. Examples are efforts to modify existing flammability regulations leading to the use of flame retardants (like California's Technical Bulletin 117) and preventing the implementation of new and unnecessary flammability regulations. In addition it provides strong support for current legislative efforts to reform the U.S. Toxic Substances Control Act.

References:

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4. Brown P, Cordner A. (2011); *Health Aff.* 30(5):906-14
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