

Legislative Analysis



BAN PRODUCTS CONTAINING DECA-BDE

Mitchell Bean, Director
Phone: (517) 373-8080
<http://www.house.mi.gov/hfa>

House Bill 4699 as passed by the House
Sponsor: Rep. Deb Kennedy
Committee: Great Lakes and Environment

First Analysis (2-4-10)

BRIEF SUMMARY: The bill would amend Part 147 (Chemical Compounds) of the Natural Resources and Environmental Protection Act to phase out the manufacture, sale, or distribution for sale in Michigan of all products containing the flame retardant chemical decabromodiphenyl ether (deca-BDE) by the end of 2013 (except for replacement components for motor vehicles built before 2013). The bill would also require certain deca-BDE producers to submit an annual report to the Department of Natural Resources and Environment.

FISCAL IMPACT: House Bill 4699 may increase expenses to the Department of Natural Resources and Environment by an indeterminate amount because of additional administrative workload related to the bill's provision requiring any person that produced or sold deca-BDE in the state to submit an annual report to the Department beginning in 2011. The report must detail the amount of deca-BDE that the person produced or sold in the United States in the prior year.

THE APPARENT PROBLEM:

Decabromodiphenyl ether (deca-BDE) is a brominated flame retardant chemical that has been widely used in the U.S in electronics (including televisions and computers), wire and cable insulation, mattresses, upholstered furniture, automobiles, and airplanes. Deca-BDE is a member of the polybrominated diphenyl ether (PBDE) family of chemical compounds that are considered toxic, persistent, and bioaccumulative. There are three primary commercial forms of PBDE: penta-, octa-, and deca-. The "Mary Beth Doyle PBDE Act" (MCL 324.14721-14725) previously banned the manufacture or distribution of products or materials containing the octa- and penta- forms in Michigan. There are now international, national, and state-level efforts to ban or restrict the deca-BDE form as well, as more has become known about the risks posed by deca-BDE and its breakdown products. For example, under some conditions, deca-BDE may break down into more toxic forms of PBDEs, including the banned octa-BDE form.

According to testimony by Dr. Ted Schettler of the Science and Environmental Health Network, the deca-BDE used in products can migrate out of them into the general environment and food chain. Deca-BDE has been found in house dust; on exterior and interior windows; in food; water; sewage sludge; the sediment of rivers, lakes, and streams; wildlife; farm animals; and human beings. (Two Michigan Representatives testified about their own participation in a national body burden study in which their bodies were tested for the presence of certain chemicals, including PBDEs. One

Michigan representative had more PBDEs in his body than any other participant in the national study.) Lake Michigan salmon have been found to contain PBDEs in one of the highest concentrations for salmon in open water. Dr. Richard Rediske, a Grand Valley State University researcher, has found PBDEs in every fish he has tested in Michigan.

According to a statement issued by the U.S. Environmental Protection Agency in December, 2009¹:

Though deca-BDE has been used as a flame retardant for years, the U.S. Environmental Protection Agency has long been concerned about its impact on human health and the environment. Studies have shown that deca-BDE persists in the environment, potentially causes cancer and may impact brain function. Deca-BDE also can degrade to more toxic chemicals that are frequently found in the environment and are hazardous to wildlife.

As noted in this statement, human health risks posed by deca-BDE may include negative effects on brain function, as well as cancer. Potential health risks cited by others include negative effects on thyroid function and reproductive system development. Some scientists are especially worried about the the potential effects of deca-BDE on the neurological development of children, as these effects may occur at low levels of exposure. Because deca-BDE is persistent and bioaccumulative, deca-PBDE levels in people, fish, and other organisms in the food chain are rising rapidly, and may be doubling or tripling every few years.

In 2008, the Michigan Department of Environmental Quality released a report summarizing the science related to the deca- and other PBDEs.² That report concluded that deca-BDE should be banned in Michigan, contingent on the availability of safe alternatives. Safe alternatives are now available, cost-effective, and in wide use according to the Ecology Center. Many manufacturers, including major Michigan furniture manufacturers, have already switched to safer alternatives or have redesigned their products to meet fire safety standards without using any fire retardant chemical. Firefighter groups support a ban on deca-BDE products because when deca-BDE burns, dense fumes and harmful gases are released, placing firefighters at risk. Supporters say that fire safety will not be compromised by the ban, and firefighters will be less exposed to dangerous fumes and gases.

On December 17, 2009, as the result of negotiations with EPA, the only two U.S. producers of deca-BDE and the largest importer of deca-BDE into the U.S. announced voluntary commitments to phase out the production, importation, and sales of deca-BDE for most uses in the United States by December 31, 2012, and to end all uses by the end of 2013. The EPA says that it will try to get other importers of deca-BDE to join this

¹ <http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/deccadbe.html>, accessed on February 4, 2010.

² Department of Environmental Quality, "Polybrominated Diphenyl Ethers: A Scientific Review with Risk Characterization and Recommendations," May 2008, available online at http://www.michigan.gov/documents/deq/deq-tox-PBDEBackground_Paper-5-08_243976_7.pdf, accessed on February 8, 2010.

voluntary initiative in the future. See Background Information. Supporters say that House Bill 4699 is consistent with this federal initiative but will provide additional protections for Michigan's people and its ecosystem. The voluntary federal initiative does not prohibit products that contain deca-BDE manufactured elsewhere in the world from being imported and sold in the U.S. In contrast, House Bill 4699 would phase out the sale of products containing deca-BDE in Michigan. Although the legacy of past use of deca- and other PBDEs will remain for a long time, supporters say that the bill will help prevent Michigan's people and ecosystem from continuing to store increasing amounts of this toxic chemical and its breakdown products.

THE CONTENT OF THE BILL:

House Bill 4699 (H-3) would amend Part 147 (Chemical Compounds) of the Natural Resources and Environmental Protection Act to prohibit the manufacture, sale, or distribution for sale in Michigan of products containing the flame retardant chemical decabromodiphenyl ether (deca-BDE) according to the following schedule:

- On December 31, 2010: Mattresses or upholstered furniture designed for residential use and any electrical or electronic equipment.
- On December 31, 2012: All other products except for transportation or military equipment (or components within such equipment).
- On December 31, 2013: Transportation or military equipment (or components within such equipment). However, service parts for motor vehicles manufactured before December 31, 2013, could still be manufactured, sold, and distributed in Michigan.

Persons could continue to sell or otherwise dispose of products containing deca-BDE in their possession on those dates. The bill would not restrict the transportation or storage of such products within Michigan for distribution outside of Michigan.

Report. Beginning in 2011, and annually thereafter, a person who produced deca-BDE for use in a product sold in Michigan or that sold deca-BDE for use in Michigan during the previous year would have to submit a report to the Department of Natural Resources and Environment that detailed the quantity of deca-BDE produced or sold by that person in the United States during the previous year.

Repealer. The bill would repeal Section 14724 of NREPA (MCL 324.14724) dealing with a PBDE advisory committee that was abolished by the Governor's Executive Reorganization Order No. 2009-11, effective May 17, 2009.

MCL 324.14721, 324.14723a, 147.724

BACKGROUND INFORMATION:

Federal deca-BDE phase-out initiative. Information about the recently-announced voluntary federal phase-out initiative, including the commitment letters from the two U.S.

producers of deca-BDE and a major importer of deca-BDE, is available on the EPA's website:

<http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/deccadbe.html>

Information about PBDEs in general is available at:

<http://www.epa.gov/oppt/pbde/>

DEQ study. In May 2008, the Department of Environmental Quality's Toxics Steering Group released "Polybrominated Diphenyl Ethers: A Scientific Review with Risk Characterization and Recommendations," available online at:

http://www.michigan.gov/documents/deq/deq-tox-PBDEBackground_Paper-5-08_243976_7.pdf, accessed on February 8, 2010.

ARGUMENTS:

For:

Banning products containing deca-BDE will help protect human health. Because deca-BDE is persistent and bioaccumulative, deca-BDE levels in the bodies of Americans are reportedly much higher (and rapidly increasing) than in people living in countries where deca-BDE is less widely used. Some scientists say that deca-BDE may interfere with brain and reproductive system development, may cause thyroid problems, and may increase the risk of cancer. Children's developing bodies and brains may be especially vulnerable to its effects.

Banning products containing deca-BDE will also benefit Michigan's firefighters. According to the Michigan Association of Fire Chiefs, when PBDE compounds are burned they release dense fumes and hydrogen bromide, a highly-corrosive gas, exposing firefighters to chemical hazards.

The bill is consistent with the federal phase-out initiative, but provides additional protections for Michigan. The bill is consistent with the voluntary federal phase-out agreements announced in December 2009, but provides additional protections for Michigan. Perhaps the most significant is that the bill, unlike the voluntary federal initiative, prohibits the sale or distribution of *products* containing deca-BDE in Michigan, whereas the voluntary federal initiative only prohibits production of the chemical itself in the U.S. or the importation of the chemical itself into the U.S. (by a major importer that has voluntarily agreed to stop importing it). Nothing in the voluntary initiative prohibits products containing deca-BDE that are manufactured outside the U.S. from being imported into or sold in Michigan or anywhere else in the U.S. The bill would close this loophole for Michigan.

A ban on products containing deca-BDE will help protect the ecosystem and food chain from further contamination. Michigan has already banned other forms of PBDE.

Deca-BDE can break down into more toxic PBDE forms in some circumstances, and are structurally similar to PCBs, banned in the 1980s because of their high toxicity and persistence in the environment. Lake Michigan salmon have been found to contain PBDEs in one of the highest concentrations for salmon in open water. A Grand Valley State researcher has found PBDEs in every fish he has tested in Michigan. Other studies have shown that PBDE levels in Great Lakes walleye and lake trout rose dramatically from 1980 to 2000.

Against:

Is the reporting requirement necessary or appropriate? Does an appropriate detection level need to be set for products that could be recycled? The Michigan Chemistry Council, which supported the H-2 Substitute reported from Committee, has expressed concerns about the reporting requirement found in the H-3 Substitute and also about establishing an appropriate detection level of deca-BDE for products that could be recycled.

Also, the DNRE wants to clarify and limit its duties and costs in connection with the reporting requirement.

POSITIONS:

The Department of Natural Resources and Environment supports the House-passed bill (H-3) in concept but is suggesting amendments to clarify and limit its costs under the bill. (2-4-10)

Dr. Ted Schettler of the Science and Environmental Health Network provided background scientific information on December 12, 2009, and supports the bill as passed the House. (2-4-10)

Dr. Richard Rediske of the Annis Water Resources Institute, Grand Valley State University, presented information about his research on PBDEs in fish, and expressed the opinion that PBDEs should be banned because they accumulate in the food chain. (12-10-09)

Dr. William Weil, Professor Emeritus of Pediatrics and Human Development, College of Human Medicine, Michigan State University, testified in support of the bill on 12-10-09, and supports the bill as passed by the House. (1-28-10)

Clean Water Action supports the bill as passed by the House. (1-26-10)

The Michigan Association of Fire Chiefs supports the bill as passed by the House. (2-4-10)

The Michigan Network for Children's Environmental Health supports the bill as passed by the House. (1-28-10) The members of this coalition include the American Academy of Pediatrics (Michigan Chapter), the Arab Community Center for Economic and Social

Services (ACCESS), the Association for Children's Mental Health, the Autism Society of Michigan, Citizens for Alternatives to Chemical Contamination, the Clean Water Fund, the Clinton County Family Resource Center, Detroiters Working for Environmental Justice, the East Michigan Environmental Action Council (EMEAC), the Ecology Center, the Healthy Homes Coalition of West Michigan, the Learning Disabilities Association (LDA) of Michigan, LocalMotionGreen, the Michigan Chapter of the National Association of Pediatric Nurse Practitioners, the Michigan Coalition for Children and Families, the Michigan Environmental Council, the Michigan League of Conservation Voters Education Fund, the Michigan Nurses Association, the Science and Environmental Health Network, and Voices for Earth Justice.

The Sierra Club supports the bill as passed by the House. (2-1-10)

The Michigan Chemistry Council supported the bill as reported from committee (H-2), but is neutral on the bill as passed by the House (H-3) (and is working on amendments). The Council has concerns about the reporting requirement found in the H-3 Substitute and also about establishing an appropriate detection level of deca-BDE for products that could be recycled. (2-4-10)

Legislative Analyst: Shannan Kane
Fiscal Analyst: Viola Bay Wild

■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.