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Alaska lawmakers target toxin used to fireproof electronics, furniture

by Christopher Eshleman / ceshleman@newsminer.com
02.12.11 - 12:15 am

JUNEAU — Four Alaska legislators last month joined policymakers around the world in trying to eliminate a toxic chemical compound used to fireproof household electronics and furniture.

Scientists link the fire retardant to cancer and other health problems. People and animals can ingest it while eating food or breathing household dust.

Environmental groups in Alaska have unanimously asked lawmakers this year to ban companies from selling electronics and furniture that contain more than trace amounts of the chemical.

Industry and governmental leaders around the world have already targeted the chemical, polybrominated diphenyl ether, for elimination. Roughly a dozen U.S. states have already banned PBDEs, which are used in bromine-based flame retardants.

Four Democrats last month sponsored measures in the state House and Senate. Rep. Scott Kawasaki, D-Fairbanks and one of the sponsors, cited scientific study that strongly suggests the compounds can cause neurological harm, cancer and hormone and endocrine disruption. He said legislators are still digging into the science behind the issue but suggested the scientific community's call for caution merits action.

"It boils down to community health ... I think it's a step in the right direction," he said of the bill.

The measures would also direct the state Departments of Environmental Conservation and Health and Social Services to draft and update a larger list of chemicals considered toxic by other state and federal agencies. It does not call for regulation beyond PBDEs, only that the list be updated every three years.

Scientists have studied the health implications of the fire retardant since at least the 1990s. The chemical is stored and carried in body fat and moves upward through the food chain, with concentrations compounding with each step and cresting in seals and other animals near the peak. That puts subsistence hunters and fishermen at greater risk than other people, said Frank von Hippel, a University of Alaska Anchorage biologist.

Von Hippel said PBDEs are shed by electronics and household products to become part of common dust, something the measures' proponents say is particularly relevant in Alaska given the need to keep doors and windows shut for much of the year.

The bills list three specific subtypes of the chemical. Companies in the United States have generally stopped making two, but the third, called deca-PBDE, is

still commonly manufactured, von Hippel said. He said they're generally banned in Europe as well.

The chemicals carry great significance for arctic communities. Von Hippel said atmospheric currents carry PBDEs and other persistent organic pollutants toward the poles and into arctic regions through a natural atmospheric process known as the "grasshopper effect." Cold weather then force the chemicals from their gaseous state and leave them to settle into the environment.

Greater concentrations here mean greater exposure to northern species of animals and to Alaskans, and von Hippel said it leaves Alaska on the front line in ongoing international discussion of how to regulate or eliminate the use of persistent organic pollutants, or POPs.

Von Hippel said mothers pass accumulated chemicals such as PBDEs to children during pregnancy and breast feeding. Pam Miller, with the Alaska Community Action on Toxics, cited a recent study that suggests women in the Yukon-Kuskokwim Delta had the highest PBDE levels of any population in the arctic.

Critics of full PBDE bans say the science behind the policy discussion falls short of justifying total prohibition, at least until substitutes are easily available. One critic is Dr. David Heimbach, a Seattle burn doctor who said he regularly saw Alaska patients over a three-decade career. He said policymakers in California voted to ban the chemical without collecting enough input from doctors first.

Heimbach said by phone Friday he'd prefer that governments phase out PBDEs instead of banning them, as Alaska's bills would do. He said the chemical's safety value should not be discounted.

"There's no question they work as fire retardants," he said.

Late last year, 145 scientists from around the world agreed to the "San Antonio Statement" outlining health hazards from exposure to bromine- and chlorine-based flame retardants. Some are already addressed in international environmental laws such as the Stockholm Convention on Persistent Organic Pollutants, but Congress is one of a handful of national legislatures or parliaments that have yet to ratify that convention. Even if Congress did adopt the treaty, it would still fall to federal and state government agencies to implement a ban.

The Alaska bills are House Bill 63 and Senate Bill 27, proposed by lead sponsors Sen. Bill Wielechowski and Rep. Lindsey Holmes, both Anchorage Democrats. They await hearings in committees focused, respectively, on commerce and health.

Contact staff writer Christopher Eshleman at 459-7582.

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