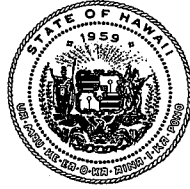


LINDA LINGLE
GOVERNOR OF HAWAII



LATE
CHIYOME LEINAALA FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

**Testimony of Chiyome Leinaala Fukino, M.D.
Director of Health**

3:30 p.m.

1 **Department's Position:** We support the intent of reducing pollution but the Department
2 respectfully opposes this measure.

3 **Fiscal Implications:** Unspecified amount of General Funds for the first year of implementation.

4 **Purpose and Justification:** The purpose of this bill is to prohibit the use of polystyrene foam food
5 containers by restaurants and takeout food operations. Under this proposal, the department is tasked
6 with enforcing a ban on the use of polystyrene foam food containers by restaurants as packaging for
7 prepared foods utilizing the specified schedule of warnings and monetary fines. The department is
8 additionally tasked with maintaining a list of suitable packaging alternatives to polystyrene foam food
9 containers.

10 The Department of Health supports the reduction of harmful chemicals in the outdoor and indoor
11 environment and foods. We share concerns about styrene. We note that the science on styrene is still
12 developing, as page 2 of the bill acknowledges. The actual health risk to food has uncertainties. Some
13 foods have styrene already. Some studies show that heating foods in styrofoam causes greater leaching
14 from container to food. As to air pollution, while incinerating and otherwise disposing of polystyrene
15 may result in the creation of byproduct chemical compounds, all municipal waste landfills, and the H-

1 Power incinerator are department permitted facilities. As such, they employ either emission control or
2 monitoring programs, and in many cases, both. We do not have data on styrene emissions from
3 permitted facilities, however.

4 As a general matter, we also favor moving away from disposables to the prevention of waste and
5 recycling. This is also State policy in HRS §342G-2. As a general matter, nothing that can be reused or
6 recycled should be disposed of in landfills. We know that this poses special challenges for the fast food
7 industry, and so the practical impact of this bill on the food industry, and ultimately consumers needs
8 close examination. We want alternatives to be available and better than what they replace. The
9 manufacturing and grocery industries should be engaged in the process of developing more
10 environmentally friendly containers.

11 Finally, we do have concerns that, although the bill does provide for general funding of the initial
12 year of implementation, the department will also require additional personnel to implement the proposed
13 program. Additionally, on-going funding of the program is not provided in the bill. In light of the need
14 for additional personnel and continued funding required to implement the proposed program, the
15 department requests that any provision of resources not adversely affect the priorities in our executive
16 supplemental budget request.

17 Thank you for the opportunity to testify on this measure.
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LATE



Styrophobia.com
a natural way to go...

3133 Waiialae Ave. Ste. 3903 Honolulu, HI 96816
Email: info@styrophobia.com
Ph: (808) BE GREEN

February 7, 2008

Testimony before the:

SENATE COMMITTEE ON ENERGY & ENVIRONMENT

Thursday, February 7, 2008 - 3:30 P.M. – State Capitol Room 414

Re: Support & suggested amendments for SB 2629 – RELATING TO HEALTH

Aloha Chair Menor, Vice-Chair Hooser and Members of the Committee:

I am writing in strong support of SB2629 (Relating to Health), which proposes to ban the use of polystyrene foam (styrofoam) food service-ware products in the State of Hawaii.

We have addressed each of the key issues below and hope to clarify what is fact and why passing this bill is so critical. The birds, turtles, and fish of the Northwestern Hawaiian Islands are dying, our beaches are polluted with plastic, we pay State and City workers to try and keep up with the loose and tumbling litter that never makes it to the landfill.

Please don't let the powerful plastic and retail industry lobbies win in our town. Cities such as San Francisco and many others have won this environmental battle. We attach a revealing excerpt at the bottom of this testimony from PlasticNews.com and a link to a video about Hawaii that convinced a City in England to ban plastic – half a world away. Let's be an example for the world – the plastic is at our doorstep.

Mahalo for your kokua in supporting SB2629 and for your public service,

Mike Elhoff

Marine Ingestion

Polystyrene Spherules in Coastal Waters

Edward J. Carpenter¹, Susan J. Anderson¹, George R. Harvey¹, Helen P. Miklas¹, and Bradford B. Peck¹
Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543

Polystyrene spherules averaging 0.5 millimeter in diameter (range 0.1 to 2 millimeters) are abundant in the coastal waters of southern New England...White, opaque spherules are selectively consumed by 8

species of fish out of 14 species examined...Ingestion of the plastic may lead to intestinal blockage in smaller fish.

Harmful marine debris such as plastic bags, rubber, balloons and confectionery wrappers is frequently ingested by marine species, which confuse them with prey species. Most marine species feed non-selectively and may consume marine debris, particularly ones accumulated in the vicinity of food items. This debris usually causes a physical blockage in the digestive system, leading to internal injuries and pain. Turtles frequently ingest plastic bags, confusing them with jellyfish which is common prey for all turtles. Research indicates at least 56 species of sea birds confuse fish eggs and crustaceans with polystyrene balls and plastic buoys, and so consume the debris. Eventual starvation may occur. Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris.

Advice to the Australian Minister for Environment and Heritage from the Threatened Species Scientific Committee on a public nomination of a Key Threatening Process under the *Environment Protection and Biodiversity Conservation Act 1999*

In June 2006, the United Nations reported that there are, on average, around 46,000 pieces of plastic litter per square mile of ocean worldwide, causing the death of over 100,000 marine mammals and turtles and one million seabirds each year **as a result of eating or getting entangled with plastic debris.**

Recycling

More than 15 million tons of polystyrene (aka Styrofoam) is produced each year, but less than 1% is recycled. Styrofoam can not be practically recycled, it can not be composted, and it is never biodegradable.

Health

From the **US Navy** (Sept. 2007): Naval Medical Center San Diego Nutrition Management Department is taking the lead Sept. 20 to protect its patrons and the environment. Balboa Café, the name given to the hospital galley, will systematically replace polystyrene (Styrofoam) take-out containers with more environmentally friendly biodegradable products. The full conversion will include 14 items with plans to phase in the remaining 12 by the end of the year.

The first items to be introduced are a compostable paper cup and a hinged, three compartment container made from sugar cane. These two items were chosen for the initial kick-off due to their high volume use. Hite said studies have shown the use of Styrofoam, which was initially developed during World War II as flexible electrical insulation, can have a long-term impact on health. In a 1986 U.S. Environmental Protection Agency Human Tissue Survey, styrene was found in 100 percent of all human fat tissues sampled.

"Styrofoam containers lose weight as styrene is absorbed into the food and drink held in the containers," said Hite. Styrene is unwittingly consumed and stored in human fatty tissue where it accumulates. Several factors determine the impact of styrene on an individual such as frequency of use and personal physiological factors. Those more sensitive to styrene build up may experience fatigue, nervousness, difficulty sleeping, blood abnormalities and carcinogenic effects.

About half of the galley patrons manage their time with take out. That hectic pace motivated Laeske to want to help educate galley customers on the harmful effects of Styrofoam. For example, microwaving food in Styrofoam is particularly dangerous.

Environmental Control Department, Directorate General for Royal Commission at Yanbu, P.O. Box 30031 Yanbu Al-Sinaiyah, Kingdom of Saudi Arabia. maqbool_60@yahoo.com

Bottled water may not be safer, or healthier, than tap water. The present studies have proved that styrene and some other aromatic compounds leach continuously from polystyrene (PS) bottles used locally for packaging. Water samples in contact with PS were extracted by a preconcentration technique called as "purge and trap" and analyzed by gas chromatograph-mass spectrometer (GC/MS). Eleven aromatic compounds were identified in these studies. Maximum concentration of styrene in PS bottles was 29.5 microg/L. Apart from styrene, **ethyl benzene, toluene and benzene** were also quantified but their concentrations were much less than WHO guide line values. All other compounds were in traces. Quality of plastic and storage time were the major factor in leaching of styrene. Concentration of styrene was increased to 69.53 microg/L after one-year storage. **In Styrofoam and PS cups studies, hot water was found to be contaminated with styrene and other aromatic compounds.** It was observed that temperature played a major role in the leaching of styrene monomer from Styrofoam cups. Paper cups were found to be safe for hot drinks.

United States Pollution Prevention November 1994
 Environmental and Toxics EPA 749-F-95-019
 Protection
 Agency (7407)
 OPPT Chemical Fact Sheets Styrene Fact Sheet (CAS No. 100-42-5)
<http://www.epa.gov/safewater/dwh/c-voc/styrene.html>

What are the Health Effects? Short-term: EPA has found styrene to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: nervous system effects such as depression, loss of concentration, weakness, fatigue and nausea. Long-term: Styrene has the potential to cause the following effects from a lifetime exposure at levels above the MCL: liver and nerve tissue damage; cancer.

How much Styrene is produced and released to the environment? Production of styrene was 10.7 billion lbs in 1993. It is released into the environment by emissions and effluents from its production and its use in polymer manufacture. Consumers may be exposed to styrene through contact with resin products used in fiberglass boat construction and repair, and in auto body fillers. **Styrene may also leach from polystyrene containers used for food products.**

Price

Styrofoam vs Paper vs Sugar Cane Bagasse - we took same case weight paper items manufactured by few different companies and compared the prices to bagasse prices. For a 10" plate, that's 2 cents more. Let's put 2 cents for the environment, for tourism, and our health!

	Pactiv Styrofoam	Chinet Paper	Pactiv Paper	World Centric Bagasse
9" Plate, 500 count/ea.	\$24 / .05ea	\$62 / .12ea	\$62 / .12ea	\$38 / .07ea
7" Plate , 1000 count/ea.	\$32 / .03ea	\$91 / .09ea		\$49 / .05ea
10" Plate, 500 count/ea.	\$37 / .07ea		\$87 / .17ea	\$47 / .09ea
10" 3 Compt. Plate 500 ct./ea.	\$45 / .09ea		\$83 / .16ea	\$46 / .09ea
12 oz bowls, 1000 count/ea.	\$33 / .03ea	\$70 / .07ea	\$67 / .06ea	\$52 / .05ea

Fuel Value

The Hawaii Food Industry Association (HFIA) has claimed that styrofoam has a high fuel value for burning at HPower incinerator. The weight of biodegradable (44g) to Styrofoam (10g) plates is 4.4 times. Styrofoam has a energy/weight value of 16,000BTU/lb. and biodegradable at 6,400BTU/lb. or 2.5 times the fuel energy by weight. Thus, biodegradable plant fiber containers offer $4.4/2.5 = 1.8$ times the fuel value over their styrofoam counterpart. The styrofoam argument **fails** at HPower. Biodegradables will produce more BTU energy when burned. As confirmed in a phone interview with HPower officials, in addition to the higher overall fuel value, biodegradables burn at a lower temperature for a longer time, thus producing a more even combustion and higher overall boiler energy. Styrofoam has a high BTU/lb, but very little weight and a lot of volume. On a large scale waste diversion, such as the result of this legislation, converting to biodegradables offers almost twice the power.

Landfill

HFIA also claims that styrofoam takes up a very small percentage by weight, of the landfill. We know that styrofoam is light, but takes up a lot of volume. Our landfill is overflowing with volume. Let's report what really matters.

Not Paper vs. Styrofoam – Biodegradable Sugar cane fiber!

While it is true paper can cost more, sugar cane fiber is very close in price as shown above. By staying with polystyrene, what's the environmental cost we are paying in trash collection, turned off tourists, increased fish prices, and landfill issues? The plastics lobby claims paper is worse than plastic for the environment – while this is not true – they have left out renewable plant fibers, such as Sugar Cane Bagasse – whose production is by far the lowest carbon footprint of all options. Sugar cane absorbs CO₂ during growth, is locally grown, and is a byproduct, otherwise inefficiently burned due to its initial water content. By making plates, we can close the cycle on locally produced, grown, and composted.

Local Agriculture

There presently are two major sugar cane companies remaining in Hawaii. We currently import our biodegradable plates, cups, bowls, and take-out containers. The fact is, these products could all be made in Hawaii, by local companies, using local waste product. These companies will not move to manufacturing without a major shift away from styrofoam. Thus no bill 2629, no local manufacturing. Please encourage local agriculture by passing SB2629.

Change

Previous testimony by K Yamada Distributors was that they might be put out of business by this bill. The fact is KYD offers a vast array of products other than styrofoam, and it is by diversifying that businesses adapt and grow. We believe KYD could easily diversify into sugar cane molded products. We also challenge KYD to what real effort has been made over the decades as a major local producer of styrofoam, at recycling it or public awareness? This pollutant can not just be mass-produced without taking responsibility for the ecological consequences. McDonald's recognized this 18 years ago by eliminating styrofoam – so can KYD. The bill provides ample time to adapt.

Proven Success

The City of San Francisco passed legislation similar to SB2629 in 2007. In less than a year, according to the City agency SFEnvironment, they have an 80% compliance among the 1,440 restaurants and food establishments sampled. This - without one fine being issued. The bill works, and works well. The City had minimal expenditures, just a basic public education notice and vendor notification.

Posted by Don Loebb on June 15, 2007 1:29 PM; [PlasticsNews.com](#)

Bag bans in Britain

Plastic bag ban stories have been so commonplace in the media for the past few weeks that I've given up linking to most of them. The trend really seems to be building all over the world. I'll make an exception to the "no link" rule with [this feature](#) from Wednesday's *Christian Science Monitor*. It's a story about how British filmmaker Rebecca Hosking persuaded her hometown of Modbury, England, to ban plastic bags, and how the "revolt" is spreading across Britain.

It was watching sea creatures choke on plastic bags in the Pacific Ocean that finally persuaded Rebecca Hosking that enough was enough.

The British filmmaker had already recoiled in disgust at deserted Hawaiian beaches piled up with four feet of rubbish, the jetsam of Western consumerism washed up by an ocean teeming with plastic. Now, filming off the coast, she looked on aghast as sea turtles eagerly mistook bobbing translucent shapes in the water for jellyfish.

"Sea turtles can't read Wal-mart or Tesco signs on plastic bags," fumes Ms. Hosking, who returned to Britain in March. "They will home in on it and feed on it. Dolphins mistake them for seaweed and quite often they'll eat them and it causes huge damage."

Within a few weeks of coming back, Hosking persuaded her hometown to ban plastic bags outright and found herself in the vanguard of a sudden British revulsion for that most disposable convenience of the throwaway society. Stores, grass-roots groups, and citizens are joining forces to reduce national consumption of plastic bags, and Hosking is fielding hundreds of requests a day for guidance.

According to the story, Hosking screened her film in Modbury, and invited the town's shopkeepers. After they watched the film, they unanimously decided to support a voluntary ban on plastic bags. Retailers across Britain followed suit, and the Sainsbury chain has gotten quite a bit of press for its reusable cotton "I am not a plastic bag" bags, which it sold for \$10.

LATE

SENATE COMMITTEE ON ENERGY & ENVIRONMENT

Thursday, February 7, 2008 - 3:30 P.M. – State Capitol Room 414

Re: Support & suggested amendments for SB 2629 – RELATING TO HEALTH

Aloha Chair Menor, Vice-Chair Hooser and Members of the Committee

When we opened Uahi Island Grill in Sept. 2007 there was no choice for us: Biodegradables were the only way to go. Being a small business with limited staff, we can afford to shoulder the costs of these products (which I understand can add up for a business with higher volume) and continually grow in profitability. I keep my costs in line, and my prices competitive, by adding the price of the biodegradable products after my mark-up, passing along only my purchase price to the consumer. Our efforts have been met with overwhelming support and appreciation from our guests.

As somebody who is already on board, I am all for a total ban of styrofoam food containers and plastic bags. However, if this cannot be agreed upon, I would also support incentives such as tax credits for businesses who choose to utilize biodegradable products, and deposits for recycling plastic bags. These would both address the monetary issues, and might spur other businesses and individuals to make the right choice, rather than blindly buck crucial legislation.

Nicholas Yamada
Chef/Owner, Uahi Island Grill
307 Uluniu St. Kailua, HI 96734
808.266-4646

LATE

SENATE COMMITTEE ON ENERGY & ENVIRONMENT

Thursday, February 7, 2008 - 3:30 P.M. – State Capitol Room 412

Re: Strong support & suggested amendments for SB 2629 – RELATING TO HEALTH

Aloha Chair Menor, Vice-Chair Hooser and Members of the Committee:

My name is George White, a second year-law student at the University of Hawaii, and I am writing in strong support of SB2629 (Relating to Health), which proposes to ban the use of polystyrene foam (styrofoam) food service-ware products in the State of Hawaii.

Having done extensive research on the contents of SB2001, a similar measure to SB2629, I thank you for providing both bills with the opportunity for public discussion and debate. I strongly support SB2629, but hope you will consider a few suggested amendments to the bill, in an effort to incorporate certain key provisions from SB2001:

1) Public education campaign

Over 100 municipalities across the United States have implemented a similar ban on Styrofoam food service-ware products, including San Francisco, Oakland, Berkeley, and Portland. SB2629 does not provide for any form of public education campaign before the ban is enacted.

In discussions with Director Jack Macy of San Francisco's Department of the Environment, he estimates an 80 percent compliance rate with SF's ban on styrofoam, without having issued a single citation. Director Macy attributes this success to the public education campaign his Department undertook before the ban was enacted.

SF's effort to educate and inform the public included:

- (1) A six-month education program;
- (2) Two mailings to the 6,000 food-service establishments in the city;
- (3) Five to six food service-ware events across the city allowing the public and businesses to ask questions, get answers, and see the many available alternatives;
- (4) Working with food distributors to provide them with as many styrofoam alternative product options as possible, , at the lowest possible cost, and make that information available and accessible to the public; and
- (5) The use of volunteers, who played a critical role by going door-to-door, talking to businesses and providing information.

While San Francisco is considered to be one of the most eco-conscious cities in the Country, Director Macy estimates that funding for such an implementation program here in Hawaii would not exceed \$200,000. It is important to note, that SF enacted its ban on Styrofoam food service-ware with no funding or appropriation to support implementation efforts.

2) Source of funding

I encourage this Committee to change the source of funding for SB2629. Instead of

appropriating monies out of the General Fund, I recommend you look to the Environmental Response Revolving Fund (ERRF) established under Hawaii Revised Statutes § 128 (d)(2). This fund is statutorily established to appropriate monies to "support environmental protection and natural resource protection programs...and to address concerns related to...solid and hazardous waste."

The implementation and enactment of the provisions of SB2629 is precisely what the ERRF was intended for. At this time, it is unclear how much money is in the ERRF or what that money is being spent on, but it is required that the ERRF have not less than 3 million dollars and not more than 20 million dollars, at any given time. Again, it is estimated that funding for successful implementation and enactment of the provisions of SB2629 would not be more than \$200,000.

3) Planning for the future

There are a couple provisions in SB2001 which are absent in SB2629 and these have to do with an outlook towards the future. Enacting a ban on styrofoam food service-ware products should be viewed as just the beginning of a greater effort and need to address the threats posed by petroleum-based plastics and products in general.

I encourage this Committee to create a window of opportunity in the years ahead to evaluate and discuss the effectiveness of such a ban, and whether it should be revised, or even extended to include other petroleum-based products such as non-biodegradable forks, knives, deli-containers, and cups. Language for such a 'window' can be found in Section 5 of SB2001.

I also encourage this Committee to encourage DBEDT to explore the possibility of manufacturing biodegradable styrofoam foodservice-ware products within the State, using our sugarcane and promoting Hawaii's agriculture industry. Hawaiian Commercial & Sugar on Maui, along with Gay & Robinson on Kauai have already expressed interest in the possibility of privately investing the necessary infrastructure for such a project, should a ban on styrofoam be implemented state-wide. See Section 4 of SB2001, should this Committee wish to adopt this suggestion.

Lastly, I do not agree with the coffee-cup exemption provided for in SB2629 and feel it is unnecessary and should be removed. If we're going to effectively address the threats posed by Styrofoam food-service ware we should not be making an exception for coffee cups. Especially when the cost of a biodegradable alternative is just 2 cents more.

With well over 100 cities across the country having implemented some form of regulation or ban on styrofoam products, Hawaii is in a unique and envious position to be the first state in the nation to do so. I urge you to consider my suggested amendments to SB2629 and to move it forward from your committee and allow this bill and this issue enjoy the benefit of further public discussion and debate.

Thank you for this opportunity to provide testimony.