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●●● Innovative solutions for a sustainable future

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Electronic submittal via: www.casustainablefreight.org

RE: Comments on Draft California Sustainable Freight Action Plan – Packaging Optimization

To Whom It May Concern:

The EPS Industry Alliance (EPS-IA) appreciates the opportunity to comment on the Draft California Sustainable Freight Action Plan. EPS-IA is a national trade association representing expanded polystyrene (EPS) protective packaging manufacturers. As you deliberate the draft Plan, there are several important points to consider under Packaging Optimization:

- **EPS environmental performance often surpasses alternative materials.** Often based on subjective information and interpretation, environmental 'scoring' is a complex process. It is a common misperception that paper-based materials universally trump plastic from an environmental standpoint. Rather, science demands both packaging design *and* waste disposal options merit careful consideration on a case-by-case basis to accurately assess environmental trade-offs. A study, "*Energy & Environmental Results for Packaging Options*", commissioned by the Oregon Department of Environmental Quality cautions that material recyclability does not guarantee improved environmental performance. The study specifically shows that a packaging configuration using expanded polystyrene (EPS) loose fill versus one using molded pulp demonstrates lower energy consumption for the EPS although the recycling ratio for the paper-based configuration is higher¹.
- **EPS is physically designed to optimize energy and materials.** EPS transport packaging is typically chosen because of its unique packaging optimization abilities - it delivers exactly the right amount of product protection with the least amount of cushioning for the given application. EPS feedstock is converted into finished product 32 times its original volume – virtually turning air into a strong and efficient packaging material that is 98% air. And because it is lightweight it reduces overall transportation cost, fuel and pollution impacts. Additional life cycle advantages of EPS packaging are its low carbon impacts and clean manufacturing technologies which result in minimal energy and water inputs with no production waste. A recent life cycle analysis by PricewaterhouseCoopers measured the environmental impacts of several fish box packaging systems, including EPS and cardboard. Results show EPS is a sustainable material for fresh fish, with similar or better results than alternative packaging².
- **EPS effectively reduces damage-in-transit.** Packaging's most important function is to deliver products safely to market, which is critical to achieving a net positive environmental impact. It is important to consider packaging's role in the full life cycle of a product – from protection during shipping, to safe delivery, to end-of life. Damaged products costs millions of dollars in wasted product as well as wasted environmental resources. By avoiding transport damage,

the optimum protection saves significantly more energy than the energy used for the entire life of the packaging. This is especially important in cold chain distribution where, in addition to thermal impacts, sensitive food and life science products must be protected from physical impacts during transit and storage to protect their integrity.

- **EPS maximizes renewable or recycled source materials.** Although polystyrene foam packaging is a miniscule portion of the solid waste stream – less than one percent (0.07%) by volume³ – the industry is continually striving to increase its recycling efforts. Despite misconceptions about its recyclability, the EPS industry has achieved an impressive average post-consumer recycling rate of 14% for the past twenty five years, and a 25% post-industrial rate. Recycled EPS is used in both closed-loop and open-loop processes to make a variety of applications from recycled-content foam packaging to durable goods and innovative new building products.
- **Product suppliers cannot customize packaging specifications for individual buyers.** For products that are subject to global distribution chains – such as computer equipment and cold chain goods – manufacturers cannot design, produce and distribute individual products using different packaging configurations. Packaging engineers give careful consideration to the function, cost and environmental performance of the materials they choose. Many companies have implemented internal environmental guidelines that apply throughout the entire packaging supply chain. EPS-IA encourages you to support this process with the knowledge that standards for environmental packaging design are a foremost consideration for packaging professionals. This is demonstrated through the recent development of organizations such as the Sustainable Packaging Coalition⁴ In addition to the cost factors associated with packaging redesign and retooling, a material change dictated by a legislative restriction can have far reaching implications that merit careful thought and consideration.

EPS manufacturers are invested in sustainability and the effective use of resources, using less material and concentrating on efficient processing for production, distribution and disposal. These challenging behind the scenes actions have resulted in measurable positive environmental impacts. We would be pleased to answer any questions you may have about EPS from a sustainability standpoint.

Please contact us directly if we can provide clarification or further assistance in your discussion.

Sincerely,

EPS INDUSTRY ALLIANCE

A handwritten signature in black ink, appearing to read "Betsy Steiner". The signature is fluid and cursive, with a small dash at the end.

Betsy Steiner
Executive Director

1. "Energy & Environmental Results for Packaging Options for Shipment of Retail Mail-Order Soft Goods," Oregon Department of Environmental Quality, Franklin Associates, 2003.
2. "Life Cycle Assessment of the Industrial Use of Expanded Polystyrene Packaging in Europe Case Study: Comparison of Three Fishbox solutions," Pricewaterhouse Coopers & Ecobilan, 2011.
3. "Characterization of Municipal Solid Waste in the U.S.: 2010 Update," U.S. Environmental Protection Agency.
4. www.sustainablepackaging.org