

**RESPONSE TO AMERICAN CHEMISTRY COUNCIL (ACC) LETTER  
DATED NOVEMBER 24, 2008**

**Comment 1:** ACC and Dart Container Corporation have released a Monterey Green Plan which commits key resources to the City of Monterey that would recycle foodservice and nonfood service polystyrene products. Since the lack of recycling opportunities is a primary reason to ban per the Checklist form, ACC is actively working to address and reconcile this primary concern for the ban.

**Response:** The ACC and Dart Container Corporation proposal is an alternative that the City will consider.

Staff continues to recommend a ban because City staff reports that polystyrene is a unique litter problem. Polystyrene is a plastic resin that is used to make up a wide range of consumer goods and packaging, and in its “foamed” or “expanded” state is frequently used to produce takeout containers for food. However, unlike many other types of packaging, littered polystyrene foam remains permanently in the environment where it breaks into tiny pieces and disperses widely. As a result, it is particularly difficult to clean up polystyrene.

It is also important to note that City staff who clean the City’s parks, historic sites, storm drains and gutters, are in the best position to understand that polystyrene is difficult to clean up in our community.

**Comment 2:** Simply substituting one food packaging material for another does not address the root cause of litter or marine debris. Many of the allowable alternative products under the ordinance also will remain permanently in the environment and disperse widely without a clean up effort. There is no such thing as environmentally responsible litter – it should be prevented through education, behavior change and a community effort with all stakeholders, as well as enforcing anti-litter laws to cur this illegal behavior.

**Response:** The City of Monterey has an extensive litter education campaign to address the root cause of litter and encourage recycling/waste reduction. Key efforts include:

- Public school education;
- Outreach at Farmer’s Markets;
- Outreach to residential and commercial uses through flyers;
- Website;
- Door to door outreach to all residences in Monterey; and
- City Newsletter

City staff continues to identify polystyrene as a specific problem in Monterey’s waste stream. (See Response to Comment 1)

**Comment 3:** While it might be observed, according to the Environmental Protection Agency, polystyrene accounts for only .7% of the waste stream. Therefore, other litter types are much more prevalent and are not properly reported in the Checklist Form.

Again, the ACC supports proven litter prevention methods that result in measurable litter reduction for all litter – product bans do not prevent litter.

**Response:** City staff that clean the City's parks, historic sites, storm drains and gutters, are in the best position to understand that polystyrene is difficult to clean up in our community.

The City also supports litter prevention methods, but has concluded that it is necessary to require "environmentally preferred materials" to specifically deal with the City of Monterey's waste stream.

**Comment 4:** The U.S. Food and Drug Administration (FDA) has established safe levels of styrene exposure that may occur from migration foodservice packaging or other products. In fact, the FDA has authorized the use of styrene monomer as an accepted food additive. Furthermore, styrene has not been classified as a carcinogen by any U.S. regulatory agency. The European Union has completed a review of styrene's carcinogenic potential and has proposed that styrene should not be classified as a carcinogen. It is also worth noting that styrene is not persistent or bioaccumulative in the environment generally or in bodies of water specifically.

**Response:** The ACC has not provided documentation that the U.S. FDA has established safe levels of styrene exposure. Even if this documentation is provided, a publication from the Environmental Protection Agency contradicts the ACC's statement. As documented in the Initial Study, the Environmental Protection Agency has found that there are short and long term adverse health effects associated with exposure to styrene (October 21, 2008 Negative Declaration Source 8: U.S. Department of Health and Human Services Public Health Service Agency for Toxic Substances and Disease Registry, *ToxGuide for Styrene*, September 2007; United States Environmental Protection Agency, *Technology Transfer Network Air Toxics Web Site*, November 6, 2007).

The City continues to support the Initial Study's conclusion that while it is difficult to quantify this impact, it is clearly beneficial to remove it from the City's ecosystems where large numbers of plants and animals flourish, and where toxins can bio-accumulate in the food chain.

**Comment 5:** Biodegradable products release methane into the air as they degrade in the natural environment. Methane is a gas that is one of the most damaging of greenhouse gases, and a major contributor to global warming. One of the stated goals of the City's ordinance is to protect the natural environment, but the City later rationalized that the Monterey Peninsula Landfill has a methane recovery system which not only discounts what would be an increase in methane released into the air from the natural environmental, but the fact is ignored that polystyrene and biodegradable products would therefore not release methane into the air from the landfill.

The City of Santa Barbara has concluded compostable products will only benefit the environment if they are collected and forwarded to an industrial composting facility of which the City of Monterey does not have. Therefore, a switch from polystyrene to compostable products will not result in an environmental gain.

**Response:** The City of Monterey's environmental review concludes that the impact to air resources is less than significant.

The City of Monterey concludes that the greenhouse gas impact of using food service-ware that is biodegradable, compostable or recyclable, is less than significant because the City is a small jurisdiction in terms of geographic area (8 square miles), population (33,000 people) and number of businesses (approximately 300) using polystyrene. In addition, the Monterey Peninsula Landfill operated by the MRWMD, where the City's waste is discarded, has a landfill gas recovery system. The system recovers methane and converts it into electricity; thereby offsetting the local demand for other nonrenewable energy sources. Recyclable materials are transported to the City's Materials Recovery Facility where recyclables are ultimately sent to recycling plants and reused as new raw materials. Recycling reduces the demand for new material extraction. As a result, the energy consumed and greenhouse gases resulting based on the total volume of containers used in our community, gas recovery system, and reuse of recycled materials is less than significant.

Cumulatively, this air quality impact is less than significant because existing businesses use polystyrene products that produce greenhouse gases as documented in the *Life Cycle Inventory of Foam and Coated Paperboard Plates* study (October 21, 2008, Negative Declaration Source 13: Franklin Associates, LTD., *Life Cycle Inventory of Foam and Coated Paperboard Plates*, May 9, 2008). The change to materials that are biodegradable, returnable or easily recycled has a less than significant impact due to the reasons stated above: volume of containers used in our community, gas recovery system and reuse of recycled materials.

It is also important to note that the City's primary goal in implementing the new Ordinance is to reduce the amount of litter and the impact to the natural environment (particularly marine environment), a vital component of the City's economy and quality of life.

**Comment 6:** The ACC is very sympathetic to the plight of marine and other wildlife, and always promotes environmentally beneficial policies. However, seabirds digest all forms of litter and have even been found to ingest rocks. In addition, the reference that 71% of the studied birds had plastic in their stomachs is irrelevant because the City is proposing a ban of polystyrene and not a ban of plastics. The entire section on page 10 of the Initial Study does not provide any significantly valid evidence or reference that the studies birds died because of polystyrene ingestion.

**Response:** The City concurs that sealife ingests many forms of litter. However, it is important to note that the Monterey Bay is a unique coastal resource (Monterey Bay National Marine Sanctuary). The Monterey Bay National Marine Sanctuary (MBNMS) Superintendent indicates that, "In the marine environment, foamed polystyrene is of particular concern because it is light, it floats, and it is highly visible. In addition, it breaks into small pieces, increasing the chance of ingestion by wildlife. Polystyrene pieces, which look like food to many species, is frequently ingested by wildlife and results in choking, reduced appetite, reduced nutrient absorption, and starvation. The MBNMS beach survey program, BeachCOMBERS, commonly discovers plastics and polystyrene that have been ingested by seabirds. Using seabirds collected by the BeachCOMBERS program, researchers at Moss Landing Marine Laboratories analyzed the stomach contents of 190 Northern fulmars, a medium sized seabird, collected along

Monterey Bay beaches in 2003-2004, and found that 71% of the birds had plastic in their stomachs.” (October 21, 2008, Negative Declaration Source 6: Paul Michel Superintendent, *Monterey Bay National Marine Sanctuary Letter*, August 12, 2008).

The City of Monterey supports the *Ordinance Requiring the Use of Environmentally Acceptable Food Packaging* because it addresses our community’s specific litter problem and helps protect the MBNMS.

**Comments 7 and 9:** City staff does not have any evidence to support the claim that by reducing the amount of polystyrene, the City’s historic sites, parks, greenbelts and oceans could be cleaner and more easily maintained.

**Responses:** City staff reports that polystyrene is a unique litter problem. Polystyrene is a plastic resin that is used to make up a wide range of consumer goods and packaging and in its “foamed” or “expanded” state is frequently used to produce takeout containers for food. However, unlike many other types of packaging, littered polystyrene foam remains permanently in the environment where it breaks into tiny pieces and disperses widely. As a result, it is particularly difficult to clean up polystyrene.

It is also important to note that City staff that clean the parks, historic sites, storm drains and gutters, are in the best position to understand that polystyrene is difficult to clean up in our community.

**Comment 8:** The City has not conducted a single scientifically valid study to make the conclusion that the environment will improve upon the ban of polystyrene food service products. They have not determined how much comes from land or marine sources outside of the city, how much is littered because of the transient tourist industry, how much of the polystyrene is from ice chests or non-service products, taken steps to enforce anti-litter laws, implement revised litter abatement programs or taken the polystyrene food service industry up on their offer to explore ways to assist with litter clean up and recycling.

**Response:** The City of Monterey does not need a scientific study to conclude that polystyrene is a problem in our community. City staff that clean the City’s parks, historic sites, storm drains and gutters, report that polystyrene is a problem because it breaks into small pieces and is easily wind borne. As a result, the City is in the best position to understand what is difficult to clean up in our community.

**Comment 10:** Biodegradation would take much longer than the amount of time it takes a product to be discarded and hauled to the landfill. Also it is often mistakenly thought that landfills act as composters, when in reality they are vast mumifiers of waste. Very little of the waste discarded in today’s modern, highly engineered landfills actually biodegrades. Since degradation of materials can create potentially harmful liquid and gaseous by-products that could contaminate groundwater and air, today’s landfills are designed to minimize contact with air and water required for degradation to occur, thereby practically eliminating the degradation of waste. In fact, landfills are highly regulated by the U.S. Environmental Protection Agency, with comprehensive guidelines meant to prevent any significant decomposition of materials and accompanying production of atmospheric gasses and leachate. Therefore, there is a clear disconnect between the amount of degradation that occurs, and the claim that the amount of food packaging would be less at a landfill.

**Response:** The City has a recycling facility that can accommodate additional recyclables. By increasing a portion of the waste stream from a nonrecyclable material to a recyclable material, it will be possible to reduce the amount of food packaging at the landfill.

**Comment 11:** Compostable products will not break down unless they are subjected to a minimum high temperature. The ACC has not found any scientific evidence, looking at the environmental properties of various products, which suggests that Polylactic Acid (PLA) and other compostable products degrade in the natural environment. A statement to the contrary would incorrectly suggest that these products would somehow eventually degrade if littered. Since Monterey does not have an industrial based composting facility to accommodate the substantial amount of product that would result from a polystyrene ban, compostable products will act exactly the same in the environment as polystyrene and other forms of litter.

**Response:** The City's goal is to encourage alternative packaging materials that are biodegradable, returnable or easily recycled. The City has a recycling center that recycles cans, bottles, cardboard, mixed paper and mixed plastics. In addition, the MRWMD has initiated a composting program.

The City's current goal is to address the litter issue that polystyrene poses. As reported by the City's staff, polystyrene is a problem because it breaks into small pieces and is easily wind borne. As a result, it makes it difficult to cleanup polystyrene.

**Comment 12:** Jean Michel Costeau has previously stated that bans do not work.

**Response:** Polystyrene is a problem in our community. City staff that clean the City's parks, historic sites, storm drains and gutters, report that polystyrene is a problem because it breaks into small pieces and is easily carried by the wind. The ban will help the City of Monterey address a specific litter issue in our community.

**Comment 13:** A City of Carmel staff report states that the region will not realize any benefit of compostable products because a local industrial composting facility does not exist.

**Response:** The City of Carmel adopted a ban on polystyrene. (See Response to Comment 11).

**Comment 14:** The City of Santa Barbara states that no alternatives to EPS will benefit the environment without a composting infrastructure.

**Response:** The City of Santa Barbara adopted a ban on polystyrene. (See Response to Comment 11).

**Comment 15:** The City of Seattle has concluded that a ban on EPS would increase nonrenewable energy use by 214%, and green house gas emissions by 234%.

**Response:** The City of Monterey has determined that the air quality impact of the proposed Ordinance is less than significant. As mentioned previously, the City's goal is to encourage alternative packaging materials that are biodegradable, returnable or easily recycled.

The project's environmental review concluded: The City of Monterey concludes the greenhouse gas impact of using food service-ware that is biodegradable, compostable or recyclable, is less than significant because the City is a small jurisdiction in terms of geographic area (8 square miles), population (33,000 people) and number of businesses (approximately 300) using polystyrene. In addition, the Monterey Peninsula Landfill operated by the MRWMD, where the City's waste is discarded, has a landfill gas recovery system. The system recovers methane and converts it into electricity; thereby offsetting the local demand for other nonrenewable energy sources. Recyclable materials are transported to the City's Materials Recovery Facility where recyclables are ultimately sent to recycling plants and reused as new raw materials. Recycling reduces the demand for new material extraction. As a result, the energy consumed and greenhouse gases resulting based on the total volume of containers used in our community, gas recovery system, and reuse of recycled materials is less than significant.

Cumulatively, this air quality impact is less than significant because existing businesses use polystyrene products that produce greenhouse gases as documented in the *Life Cycle Inventory of Foam and Coated Paperboard Plate* study (October 21, 2008, Negative Declaration Source 13: Franklin Associates, LTD., *Life Cycle Inventory of Foam and Coated Paperboard Plates*, May 9, 2008). The change to materials that are biodegradable, returnable or easily recycled has a less than significant impact due to the reasons stated above: volume of containers used in our community, gas recovery system and reuse of recycled materials.

It is also important to note that the City's primary goal in implementing the new ordinance is to reduce the amount of litter and the impact to the natural environment (particularly marine environment), a vital component of the City's economy and quality of life.

**Comment 16:** The Solid Waste Association of North America's work plan states, "Advocate for legislation that would prohibit any State agency from promulgating regulations or policies that would ban materials from landfill disposal without first reviewing scientific studies on the impact to public health or the environment and that a replacement plan needs to be in place before a ban is implemented."

**Response:** The City of Monterey is proposing an alternative approach to address our community's litter problem.

**Comment 17:** The ACC presents a Monterey Green Plan.

**Response:** The ACC is taking a proactive approach to develop a recycling program for polystyrene. This is an alternative that should be considered.

From staff's perspective, the program does not address the inherent problem of polystyrene because it breaks into small pieces and is easily wind borne. This causes a litter problem in our community.

**Comment 18: City of Santa Barbara Staff Report**

**Response:** The City of Santa Barbara banned polystyrene. (See Response to Comment 11).

**Comment 19: Excerpt from Seattle Public Utilities**

**Response:** See Response to Comment 15.

**Comment 20: City of San Francisco Streets Litter Re-Audit**

**Response:** The City of San Francisco Streets Litter Re-Audit assesses the litter issue in San Francisco, a large metropolitan area.

The City of Monterey is a small community in comparison to San Francisco. The City does not need a scientific study to conclude that polystyrene is a problem in our community. City staff that cleans the parks, historic sites, storm drains and gutters, report that polystyrene is a problem because it breaks into small pieces. As a result, the City is in the best position to understand what is difficult to clean up in our community.