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ge labels.

A European Union Directive will not permit inch-pound units on consumer packages after January 1, 2010. Representatives of several consumer product companies said they would be burdened with significant production, warehousing and other costs if they are required to maintain two types of packaging for the same product unless the “dual-units” labeling requirement in the FPLA is removed.

Several industry representatives and a major trade association presented strong support for changing the FPLA to allow permissible metric-only labeling. The practical approach, they said, is to let consumers, manufacturers and retailers determine when consumer packages change to metric-only labeling.

To avoid negative customer reactions, manufacturers must consider the concerns of both retailers and consumers when considering the change to metric units. One spokesman stated while current consumer research indicates that US consumers do not prefer package net content statements overflowing with inch-pound unit information in multiple languages, industry has no incentive to conduct US consumer studies using metric-only unit net content declarations because they are not a legally permitted alternative. Companies must perform consumer research before changing to metric-only labeling. Industry does not expect an immediate change in domestic marketing practices even if the FPLA is changed. In fact, several manufacturers commented that if the FPLA were changed, they would most likely introduce metric-only labeling during new product introductions or when current products undergo a significant change in packaging or formulation, so that they could include information concerning the introduction of metric-only units in their in-store marketing and advertising campaigns.

A concerted effort must be made to break the perception that many people have of equating metric conversion with a forced change to standardized sizes (called “rational package sizes” and “hard conversion.”) While this approach was encouraged in the past in some areas, “hard conversion” is today recognized as one of the major stumbling blocks to voluntary conversion to the metric system. Most of the concerns over metric-only labeling can be traced to fears about hard conversion. The NCWM has eliminated its package size limitations and its uniform laws and regulations now permit the use of metric-only labeling. It is important to note that many countries around the world are currently considering the elimination of package size restrictions in their marketplaces (including the European Union). It appears that Unit Pricing at the retail store level, which has been available mostly on a voluntary basis from retailers for more than 30 years, may become the preferred method of providing consumers with the information they need to make value comparisons in marketplaces around the world.

While several representatives of food manufacturers expressed support for amending the FPLA to provide for permissible metric-only labeling, the objections voiced at the forum came primarily from trade associations or companies representing some food manufacturers and retailers. These concerns related primarily to problems that would be encountered if package size changes were imposed (i.e., hard conversion to metric sizes, which is not the intent of the proposed amendment). Some retailers also believe that consumers might not accept metric-only labels because they would not be able to use the metric units to make value comparisons. Their other objections relate to the expense of replacing shelf labels if changes in package net content declarations by manufacturers are not coordinated with the routine shelf-label changes that retailers make and to the possibility of consumer complaints if they do not see inch-pound units on packages.

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**The Forum on Permissible Metric-Only Labeling**

# I.Introduction

T

he United States adopted the metric system in 1866 and in 1988 Congress has declared it the preferred system of measurement for trade and commerce for this country. Transition to the metric system in the United States is to be accomplished on a voluntary basis with business and consumers deciding when it is most convenient and advantageous to bring about change in the marketplace. One goal of this initiative is to eliminate the conflict between the law that encourages the voluntary use of the metric system in trade and commerce and other laws or regulations that limit its use.

At the Forum on Permissible Metric Labeling held on November 7, 2002, several of America’s most prominent corporations, including Procter and Gamble and Binney and Smith Inc. (makers of Crayola® crayons), and a large paper manufacturer expressed a need for manufacturers to have the option of labeling their products with only metric units. One reason that manufacturers need the metric-only option is so they can simplify the packaging of their products intended for both domestic and foreign markets. Importers and retailers also have expressed support for the metric-only option.  Both importers and retailers report that acceptance and use of the metric system by their customers is increasing. Consumers are buying products with metric units and they are seeing it used more and more in the fields of health care and nutrition as well as in advertisements and news stories.

One of the biggest barriers to increased adoption and use of the metric system is concern about the cost and impact of requirements or interpretations that might require manufacturers to change the sizes of their packages. Under current laws manufacturers generally have the freedom to increase or decrease package sizes to meet the needs of their customers and provide competitive package sizes. To encourage the expanded use of the metric system it is essential to break the connection between metric conversion and the perception that it also entails the forced standardization of sizes (hard conversion). Almost every attempt to increase the use of the metric system has stalled when the “estimated” cost and widespread impact of “hard conversion” is faced. This is unfortunate because it has becomes a barrier to the use of the metric system.

It is essential to note that the International System of Units, while is generally known as the metric system, is about measuring objects not changing their size. Any object weighed or measured using the metric system has a “metric size” (e.g., this page is 21.5 cm by 28 cm) just as the same object measured using customary units has a size (8½ in. by 11 in). While the standardization of sizes provides some benefits because it simplifies things, it works with any system of measurement and should not be the deciding factor on whether or not metric units are used.

This does not imply that standardization efforts should be ignored because they, too, provide excellent benefits in most circumstances. But the decision to implement size changes must be made by those directly impacted by the effort after its costs and benefits have been carefully considered and properly balanced as part of a planned change coordinated with all parties who would be affected so that the cost is minimized. The proposed changes to the FPLA presented in this report do not impose restrictions on package sizes.

When it comes to consumer products, standardization must be done on a voluntary basis (e.g., bottled water, olive oil and soft-drinks all have some degree of standardization already and it has been done voluntarily) so that consumers have a say in what they can purchase and so that manufacturers and the distribution and retailing system are not burdened with costly changes in machinery, packaging and shipping containers and shelving, just some of the items impacted when the dimensions of a retail package are changed.

## Exports and International Competition

Global trade is already multi-lingual; within the foreseeable future manufacturers will be required to show only metric units on their package labels in many major marketplaces. To continue to be competitive, they must avoid the cost of maintaining separate inventories of metric-only packaging for use on exports and "dual-units" labeling for products sold in this country. While it is possible that permissible metric-only labeling option may increase exports of U.S. products, it is a certainty that without it our manufacturers will incur needless packaging and inventory costs.

Freeing up label space will also help by providing manufacturers with more space to present safe use directions and other information on products to comply with a wide range of emerging labeling requirements (e.g., organic or country of origin for many food products, and retained moisture notices on meat and poultry products).

## Importers and Retailers

U.S. manufacturers are not the only ones who would benefit from the option of metric-only labeling to ensure that their products can be sold marketplaces around the world. A similar dilemma is faced by importers and retailers who purchase manufactured goods from other countries and bring them into our marketplace where both metric and inch-pound units are required. At the forum, representatives of the Arts and Creative Materials Institute Inc. (ACMI), an international trade organization of more than 200 art and craft materials manufacturers, made a strong case for metric-only labeling by illustrating how the current labeling requirements for dual-units will impose an economic burden on their membership as more and more countries require metric-only labeling.

For example, if the FPLA is not amended before the EU Directive goes into effect, manufacturers in other countries that do not have multiple types of packaging (i.e., packaging with metric units for the EU and packaging with both metric and inch-pound units for the United States) will not be able to sell products in the United States with only metric units and conversely U.S. manufacturers who have packaging with dual-unit labels will not be able to sell those products in the EU.

The ACMI membership consists of small businesses that have product lines too limited to support multiple types of packaging. Different types of packaging impose additional storage demands for separate inventories needed to maintain separate packages for the various countries where they market their products. Without a change in the law, these and other manufacturers, both small and large, will be faced with higher production and inventory costs or they will have to stop selling their products in one or other of the markets. This would result in less competition and fewer product choices that would be detrimental consumers and business alike. On the other hand, requiring companies to maintain multiple types of packaging increases costs that will either be passed onto consumers or absorbed by the manufacturer. If costs have to be passed onto consumers, manufacturers could be placed at a competitive disadvantage because prices have to be raised to pay for maintaining multiple types of packaging. Importers will be able to provide products to consumers at lower cost if they have the option of metric-only labeling since they would be able to avoid having to pay suppliers to label products with “dual-units.”

Everyday, retailers selling packages of imported foods and other products with only metric units in the Pennsylvania, Maryland and Washington, D.C., risk legal sanctions because the products they offer are not available from European manufacturers with dual-units. These stores are catering to their customers and should not be penalized for providing their customers with metric labeled products at the lowest possible price. This is an important because small retailers can only continue to provide those products at the lowest possible price if they can sell the metric-only products using the same packaging that their suppliers use in their home markets.

Requiring retailers or importers to pay additional fees to have packages relabeled (sometimes by hand) to meet the current “dual-units” requirements of the FPLA inflates the price of the products to consumers who routinely purchase them based on metric units. Another reason to avoid relabeling packages after they are received in retail stores is that it may result in conversion errors and labeling which may not meet other labeling requirements for minimum type size, color contrast, or placement. It is important to note that many of these metric-only products are sitting on store shelves along side domestic products that are required to include metric units, so value comparison is possible because consumers can use the metric units to compare package values if a store does not provide unit pricing shelf labels.

## Consumers

Use of the metric system continues to grow in the United States. Increasing everyday use is helping people to better understand it and become more proficient in its use. Consumers purchase packages labeled with only metric units of measure every day. They have become so accustomed to purchasing soft drinks and other beverages by the liter that today practically everyone can identify a 2 liter bottle without reading its label. A greater understanding of the metric system is crucial in helping consumers understand and relate to the measurements used in health care with prescription and over the counter drugs and with nutritional labeling information provided with recipes and on packages of food products. By using metric units in their everyday activities, people are learning to use and relate to the quantities as easily as they currently do using pounds and ounces and feet and inches.

Metric units are already in use on a wide variety of products that are currently sold in the marketplace. For example, prescription drugs, over-the-counter medicines and vitamins are sold in milligrams and grams, and most tires for our vehicles are sized in millimeters. The need for consumers to gain a greater understanding and increase their use of the metric system in these areas is an important priority of this effort so that they can make decisions to improve their health and that of their families. For more than a decade, one of this nation’s top priorities has been to educate consumers about the nutritional value of foods so that they may eat their way to better health. According to the Food Marketing Institute, “more than 85% of supermarket shoppers in the United States attempt to eat a healthier diet.” This important information tells consumers what their daily intake of fat, cholesterol, sodium and carbohydrates should be in metric units and how much the product contains so that they can choose the products that best help them maintain a healthy lifestyle. Many consumer products, such as wine and distilled sprits, are sold by the liter or milliliter, and each day consumers buy millions of 500 milliliter, and 1, 2, and 3 liter bottles of a wide variety of beverages such as water and sodas. Metric units of measurement are also available on many Internet sites, including the Weather Channel, which gives its users the option of viewing temperatures in degrees Celsius, wind-speed in kilometers per hour and precipitation in millimeters.

The importance of increasing our ability to both understand and use the metric system accurately is crucial to protecting public health and safety. A recent news story in the Wall Street Journal reported the results of a study by the U.S. Pharmacopeia’s Center for the Advancement of Patient Safety which found that the “incorrect administration of drugs is a significant cause of errors and poses an especially serious risk to children and emergency room visitors ... for children, the problem often stems from a miscalculation when converting weights from pounds to kilograms, leading to improper dosing.”

It is common to find errors whenever weights and measures are converted and this is not limited to the use of the metric system. They commonly occur when people convert fractional ounces or pounds into decimal units, and when a weight or measure value is converted from one system to another, or even to different units in the same system. Any type of conversion process increases the possibility of mathematical and rounding errors. Also, the original value can be very inaccurate because of errors in weighing and measuring instruments. It is important to note that most users do not know how accurate their scales and measuring instruments are because their accuracy can only be determined using specialized test equipment that most users do not have using test procedures that most do not understand. While the best answer for the situation described in this story is to convert hospital and physician’s scales to the metric system it still will not address the need for the public to learn to understand and relate to metric units so they can understand health related information.

The world marketplace is a constantly changing environment and, while change or proposed change seems difficult regardless of magnitude, U.S. consumers readily accept change in the retail marketplace if the change is properly implemented and they are provided with appropriate information and explanation of the change as part of marketing efforts. The working group will develop and provide case studies and other information to assist manufacturers in developing effective consumer education and marketing efforts.

Ensuring that consumers are able to make value comparisons must be one of the critical issues addressed in the transition of our marketplace to the metric system. There is simply no better tool for value comparison than the unit pricing information that many retailers already provide. The working group will explore ways of increasing uniformity and accuracy of unit pricing as well as increasing its availability throughout the marketplace.

Several comments were made in connection with package labeling and methods of sale that identified a number of packaging or marketing practices (unrelated to metric or inch-pound units) that have recently been found in the marketplace that may be misleading or confusing to some consumers. Tom Coleman, of NIST, described several examples of methods of sale that may confuse consumers (e.g., selling the same product by weight in sales from bulk by dry measure in sales of packages in the same store). He also stressed the need to increase consumer use of unit pricing information when they shop (e.g., in a recent consumer survey by the Progressive Grocer Magazine, 82.8% of the respondents rated the availability of unit pricing presented on store shelf tags as an important criterion for selecting a store.) Incorrect unit prices and scanner pricing errors are also issues that have been recently raised by the media that can be resolved through active collaboration with the retail food industry. Mr. Coleman concluded his talk by saying that “our challenge is to develop guidelines that prevent unfair or deceptive methods of packaging and labeling” to ensure equity in the marketplace and that NIST would work with consumers, manufacturers and retailers and other interested parties to achieve that goal.

# II.The Need to Amend the Fair Packaging and Labeling Act

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t has been more than a decade since the FPLA was amended to require metric units to be displayed on packages. The purpose of that change was to familiarize consumers with metric units so they could learn to equate the quantities to the units of measure. To that end, manufacturers have included metric units on package labels for more than 30 years, especially on products that they intend to sell both here and in other countries. The 1992 changes to the FPLA have been successful in helping consumers learn metric units and relate them to inch-pound quantities.

Prior to 1992, the FPLA required a declaration of quantity to be in inch-pound units as a dual quantity statement, this meant that a package had to include both ounces and the largest whole unit (e.g., 32 ounces (2 lb)) in the net quantity statement and ounces had to be primary, or listed first. The 1992 amendment dropped the dual quantity statement and instead required both inch-pound and metric units to be shown in the largest whole unit with either declaration appearing first. The metric units have proven informative and have helped consumers learn to relate metric quantities to the equivalent inch-pound quantities. The proposed change to the FPLA would allow manufacturers the option of showing only metric units in their net quantity declarations.

Currently, FPLA requires a dual-unit label such as shown in the examples in box A or B:

**A** or

**B**

The proposed amendments to FPLA would permit dual-unit labels such as those shown in boxes A &B or a metric only label as shown in box C:

**C**

All of these examples represent the same quantity of product. However, only the metric declaration is required to be consistently displayed as it appears above so that value comparisons using the metric quantities are always possible. The inch-pound designations may differ, as seen in boxes A and B. Still, the declarations shown above represent the same quantity of product.

The FPLA and other Federal laws and regulations govern the labeling requirements for most consumer products; however, many products fall only under state laws. In 1999, the National Conference on Weights and Measures (NCWM) voted to amend its Uniform Packaging and Labeling Regulation (UPLR) to allow packages of products not subject to Federal regulations to be labeled with only metric units. The NCWM’s position is that the marketplace is the best judge of when metriconly labeling is appropriate. Since January 1, 2000, the UPLR has allowed metric net quantity declarations on consumer packages. The UPLR has allowed metric-only labeling on non-consumer packages (those packages marked for wholesale and industrial trade) for more than 20 years.

According to Mr. Louis E. Straub, Chief of the Weights and Measures Section of the Maryland Department of Agriculture, who represented the NCWM at the forum, more than 40 States (Figure 1) have adopted the metric-only labeling provisions of the UPLR and most others are in the process of adoption.



Figure 1. States that allow metric-only labeling (11/1/02)

This change in state and local labeling requirements enables U.S. firms that also do business in Canada, Mexico, the European Union (EU), and other markets to use a global package labeled in a manner that is compliant in all markets. If Congress follows the lead of the States, Federal laws and regulations would eliminate barriers to the use of metric-only labeling on all products nationally.

Mr. Straub said the NCWM membership is strongly committed to working towards the international harmonization of laws and regulations related to legal metrology, while it also works to ensure equity between sellers and consumers and fair competition in the marketplace. According to Mr. Straub, the NCWM has eliminated barriers to the use of metric units in trade and commerce in all of its model laws and regulations so that the marketplace is free to use the metric system when consumers and business decide to change.

Today, under state and local laws, all scales, gas pumps and other weighing and measuring instruments used in trade and commerce can be calibrated to weigh or measure using the metric system. Also, unit pricing for products sold by weight can be by the price per kilogram or price per 100 grams (e.g., if a product costs $7.69 per pound its unit price in metric units would be shown as $16.95 per kilogram or $1.69 per 100 grams).

## European Union Will Require Metric-Only labeling by 2010

After January 1, 2010, a European Union (EU) Directive will require that all packages sold in the EU be labeled with only metric units of measurement. The global nature of the marketplace means that the Directive will have an impact on the United States market and impact both domestic and European companies. A letter from the European Union regarding this deadline for metric-only labeling is shown in Appendix A. There are other markets around the world where metric units are required, some of which also allow inch-pound units to appear on packages that come from the United States. Governments in these countries want to change their laws to require metric only to be consistent with the EU. Correspondence from the governments of Japan and New Zealand (available at http://www.nist.gov/metric on the Internet) shows broad international support for metric-only labeling and indicates that U.S. exporters and importers will find it easier to buy and sell goods in markets that are predominantly metric-only.

Closer to home, it is important to note that most of the countries in this hemisphere (e.g., Canada, Mexico and the remainder of Central and South America) also require metric units on consumer packages but permit inchpound units to be shown as an added option. The governments of the Americas are working through the Inter-American Metrology System (SIM) to identify and resolve labeling conflicts.  Some of these issues include the predominate/required use of metric units, language differences, and other variations in labeling requirements from one country to another. It is the view of legal metrology officials around the world that allowing only metric units to be used on labels will reduce clutter and may help to improve consumer understanding of quantity and other information.

# III.How Permissible Metric-Only Labeling Will Be Implemented: Concerns and Benefits

C

hristopher Guay of Procter and Gamble expressed that company’s support for the initiative to allow metric-only labeling to be used on packages sold in the United States. Mr. Guay said that companies thrive by providing the best value to retailers and their customers and they need to be able to work with retailers and their consumers to determine when and how to use metric-only on that company’s products. He said current labeling regulations require redundant information to appear on packages, and this results in labels becoming too complex for most people to understand. At times, he said, “there is not enough room on labels to include other information consumers want and need.”

He also presented examples of the net quantity of contents labels Procter & Gamble uses on the packages it produces for sale in the U. S. and Canada.  All his examples showed package labels overflowing withthe required net quantity information that might confuse consumers more than inform them. Mr. Guay also reported that consumers have indicated that they do not like package labels that appear to overflow with net contents information in multiple languages.  Much of this overflow of net content information is a direct result of the FPLA's dual-unit requirement and national requirements for use of multiple languages.  The examples shown in this presentation prove that labels could be simplified if manufacturers could use only metric units.

Procter and Gamble supports the proposed amendment because it will allow market forces to determine when companies switch to metric-only labeling; most likely on a product-by-product basis. Mr. Guay also explained that even if the FPLA is amended, it would likely take several years for the change to have an everyday impact on packages in stores since manufacturers design packaging several years in advance. He also said to expect little change immediately since the marketplace is very competitive and "we cannot afford to alienate our consumers!" The bottom line for manufacturers considering a change will be to conduct research to find out when using metric-only labeling would be appropriate. As companies introduce products with only metric units, they can use marketing and educational efforts to promote the new packaging. This type of effort is commonly used by businesses to help customers to accept new products or to introduce changes to existing brands and it is often supported with consumer information telephone lines.

The forum marked the beginning of a collaborative effort among government, industry and consumers to implement permissible metric-only labeling for products subject to only state regulation. Once FPLA is amended, it can be expanded to include all other products. Together, the working group will develop labeling and advertising guidelines for metric only packages and it can also create educational materials to assist retailers, consumers and others to better understand metric units and encourage consumers to use unit pricing and other available information to make value comparisons.

The option to use only metric units for package declaration information will also:

Permit manufacturers to label with only metric units, which will increase efficiencies for companies to market their products in international trade. Manufacturers will decide which method of labeling to use for both domestic and foreign markets based on the needs of their customers.

Simplify labels and reduce confusion on products that are required to be labeled by volume in one market and by mass in another, by eliminating the use of the same inch-pound unit “ounce” for volume and mass.

Reduce the space required for dual-unit labeling and free it up for other consumer information.

Allowing metric-only products on the shelves alongside products with dual-unit labeling will continue to help consumers establish mental "reference points" of the metric quantities they use routinely. One of the goals of this collaborative effort will be to ensure that consumers are able to make value comparisons between products with dual-unit labeling and those labeled with only in metric units. Another goal will be to explore ways to help consumers make value comparisons on a wider range of products where unit pricing information is not generally available. Another goal will be to promote uniform labeling and eliminate the use of incorrect symbols and improper quantity claims to ensure fair competition.

## Comments from Some Members of the Food Industry

Objections to metric-only labeling came primarily from the Food Marketing Institute (a trade association representing food retailers) and a dairy industry representative. Their concerns relate primarily to the potential problems that would be encountered if changes in package sizes are imposed (i.e., hard conversion to metric sizes). Package size restrictions are no longer seen as a reasonable or practical means of enabling consumers to make value comparisons since unit pricing began eliminating the justification for imposing standardized package sizes in the United States more than three decades ago. A similar process is currently going on around the world with countries such as New Zealand and the member states of the EU considering the repeal of laws that mandate package sizes. The proposed amendment to the FPLA will not impose any restrictions on package sizes, so concerns in this area should be resolved.

Lorelle Young, President of the U.S. Metric Association (USMA) addressed the issue of package size restrictions in her presentation by saying that the USMA “does not support the notion of packaging in standard metric sizes” as it “believes companies are the best judges of the sizes to use in marketing their products.”

FMI’s most significant concern was that it believes that consumers may not be able to make value-comparisons between similar products of various sizes if some manufacturers use the metric-only option and others use inch-pound. Consequently, coordinated action is needed to address the concerns of industry and consumers.

# IV.Proposal to Amend the Fair Packaging and Labeling Act (FPLA)

## a.Objectives

A

mending the FPLA would give packagers greater flexibility to provide labeling information that meets the needs of their diverse consumers. Package label declarations stated in metric units would be exempt from the current requirement that declarations of net content also include inch-pound units, allowing packagers to label their products with either metric units only or with both metric and inch-pound units. The proposed amendment to the FPLA would help achieve the following objectives:

- Enable consumers to use metric information to make value comparisons.

- Update labeling options, allowing manufacturers to make labeling decisions based on knowledge of customer needs and the demands of their markets.

- Permit certain packagers, through increased labeling flexibility, to reduce production and packaging costs by producing fewer different labels for different markets.

- Permit packagers to continue to use existing packaging labeled with both inch-pound and SI units. This means that no producer, packager, or store would be required to take any action or incur any cost based on this amendment.

- Strengthen the ability of United States manufacturers to compete in the global marketplace.

## b. Background Information on the Fair Packaging and Labeling Act.

The Fair Packaging and Labeling Act relates only to the net quantity of contents information on packages, goods, or commodities that are sold on the basis of weight or measure (i.e., it does not apply to electronic or industrial equipment and appliances). Labeling requirements for packaged goods are applied to packages based on who will be the ultimate consumer. There are two classifications of products: one class is “consumer” packages that are intended for sale in retail stores, such as food or department stores. The other class is “non-consumer” packages that are intended for sale in wholesale trade, such as by a manufacturer who packages 25 kg bags of chemicals for sale to another manufacturer for use in producing another product. The Fair Packaging and Labeling Act requirements are not applicable to all packaged goods.

1.The FPLA requirements apply only to “consumer commodities,” including:

a.Foods, drugs (except prescription), and cosmetics, and these are subject to the labeling regulations of the Food and Drug Administration

b.Any other article, product, or commodity of any kind or class which is customarily produced or distributed for sale through retail sales agencies or instrumentalities for consumption by individuals, or use by individuals for purposes of personal care or in the performance of services ordinarily rendered within the household, and which usually is consumed or expended in the course of such consumption or use (e.g., soaps and detergents, paper products, and waxes and polishes.) and these are subject to the labeling regulations of the Federal Trade Commission

2.The FPLA requirements do not apply to:

a.Packages intended for export (unless they are also intended for sale in the U.S. marketplace.)

b.Meat or meat product, poultry or poultry product, and some packaged agricultural seed which are subject to the labeling regulations of the U.S. Department of Agriculture.

c.Pesticides that are subject to the labeling regulations of the Environmental Protection Agency.

d.Alcohol, beer, wine and tobacco or tobacco products which are subject to labelingregulations of the Department of Treasury

e. All other products that fall under the jurisdiction of State and local regulations that are based on the Uniform Packaging and Labeling Regulation (UPLR), NIST Handbook 130.

3.Some products that can already be labeled with only metric units of measurement.

The following packaged products currently may be labeled in metric-only units. Many of these products have been labeled with only metric units for more than 25 years.

a.Wine and spirits (except for beer).

b.Camera film, videotape, audiotape, and other imaging and audio media.

c.Packages of seed with net contents of less than 225 grams.

d.Consumer products not covered by the FPLA. The Uniform Packaging and Labeling Regulation (NIST Handbook 130), which the States adopt to regulate most consumer products not covered by the FPLA, states, “The requirements for statements of quantity in inch-pound units shall not apply to packages that bear appropriate SI units.”

e.Non-consumer packages of any product or commodity. This includes tens of thousands of different products and commodities bought and sold in wholesale trade. However, it does not include food, drugs, meat or poultry, pesticides, and some packaged agricultural seed.

# V.Proposal to Amend the FPLA for Permissible Metric-Only Labeling

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he proposal that NIST has developed includes proposed amendments to Section 1453 of the Fair Packaging and Labeling Act (FPLA) for permissible metric-only labeling. The proposed amendments will modify the FPLA to require packages to have net quantity of contents declarations in metric units but would also allow inch-pound units to also be declared as an added option. Nothing in the proposed amendments should be construed to apply to unit pricing, advertising, recipes, nutrition labeling, other general pricing information or to require changes in package sizes.

The amendments should be adopted so that its effective date occurs well before the January 1, 2010, deadline for metric-only labeling in the European Union. This lead time is necessary so United States’ regulatory agencies can implement the metric-only labeling provisions in their regulations and so manufacturers who choose to switch to metric-only labeling for export purposes will have ample time to design and implement the use of the new packaging.

The complete text of the Fair Packaging and Labeling Act with the proposed amendments in their proper context is provided in Appendix B. The clauses of Section 1453 that would be amended include: (a)(2), (a)(3)(A), (a)(5), and (a)(6).

**Proposed amendments to: §1453 Requirements of Labeling; Placement, Form, and Contents of Statement of Quantity; Supplemental Statement of Quantity**

i.a. Amend (a)(2) by adding the text shown as underlined:

(a)(2) The net quantity of contents (in terms of weight or mass, measure, or numerical count) shall be separately and accurately stated in a uniform location upon the principal display panel of that label:

(A) using the most appropriate unit of the metric system of measurement and the inch-pound measurement equivalent, except as provided in paragraph (6) of this subsection; or

(B) using only the most appropriate units of the metric system of measurement.

**b.Amend (a)(2) by deleting the struck-through text:**

~~(a)(2) The net quantity of contents (in terms of weight or mass, measure, or numerical count) shall be separately and accurately stated in a uniform location upon the principal display panel of that label, using the most appropriate units of both the customary inch/pound system of measure, as provided in paragraph (3) of this subsection, and except as provided in paragraph (3)(A)(ii) or paragraph (6) of this subsection, the SI metric system.~~

**ii.Amend (a)(3) (A) by adding the underlined text and deleting the struck-through text:**

(a)(3) The separate label statement of net quantity of contents appearing upon or affixed to any package:

(A) for those portions of the net quantity of contents statement using inch-pound units,

(ii) if on a random package, may be expressed in terms of pounds and decimal fractions of the pound carried out to not more than three decimal places; ~~and is not required to, but may include a statement in terms of the SI metric system carried out to not more than three decimal places~~

**iii.Amend Section (a)(5) by inserting the underlined text as shown:**

(a)(5) For purposes of paragraph (3) (A) (ii) and paragraph (6) of this subsection, the term "random package" means a package which is one of a lot, shipment, or delivery of packages of the same consumer commodity with varying weight or mass, that is, packages with no fixed weight or mass pattern.

**iv.Revise (a)(6) by inserting the underlined text as shown:**

(a)(6) The net quantity of contents statement for foods that are packaged at the retail store level and for random packages shall be expressed using one of three possible regimes: using only the most appropriate units of the metric system, using only the most appropriate inch-pound units, or using both metric units and inch-pound units.

**Delete the struck-through text in (a)(6) as shown:**

~~(a)(6) The requirement of paragraph (2) that the statement of net quantity of contents include a statement in terms of the SI metric system shall not apply to foods that are packaged at the retail store level.~~

# VI.Conclusions

O

ver the last decade, the marketplace has gone through frequent cycles of evolution that at times are really revolutions. Today’s products and stores (e.g., the vast menu of ready-to-eat foods in food stores and superstores that sell only office or building supplies) were not even thought of 10 years ago. Consumers expect the marketplace to be a source of products from around the world as they have come to expect retailers to provide them with both quality and value in addition to new products.

Permissible metric-only labeling will enable manufacturers to package and ship their products to other markets where metric units are required without burdening them with the cost of maintaining two different packages or labels for the same package because of requirements for net content labeling. While multi-lingual labeling addresses the differences in languages around the world, there is the growing reality that the metric system will be the only measurement language in the global marketplace.

It is almost certain that the European Union will require metric-only labeling at the end of 2009 and that deadline, although still several years away, is coming up fast when we consider the time it would take for Congress to amend the FPLA, and then for the appropriate agencies to adopt changes in their regulations. Manufacturers will need to know long before 2009 whether they will be able to use their metric packaging and labeling in the U.S. marketplace as well others around the world, or whether we will be placing our manufacturers at a competitive disadvantage in the global marketplace.

Requiring manufacturers and importers to pay for special packaging for both inch-pound and metric units is simply untenable and would result in higher prices for consumers. Consumers also need this extended time period to become accustomed to packages labeled in only metric units. The gradual transition of the retail marketplace will allow the consumer to establish metric reference points for metric units through the experience of dealing with metric packages mixed in with common inch-pound units.

Amending the FPLA to permit metric-only labeling would be a step towards increased use of the metric system in this nation’s marketplace, helping consumers and others to use metric units on an everyday basis and to gain a greater understanding, while also allowing manufacturers and others to use packaging designed for a global marketplace. This will benefit U.S. consumers in the long term as they will gain a better understanding of the measurements connected with both prescription medicines and the nutritional contents of their foods that are mostly based on the metric system.

Long-term benefits will result if the everyday use of the metric system increases so that industry and businesses gain efficiencies through the use of an internationally accepted and used system of measurement. Increased use of the metric system in the marketplace will reinforce the efforts of the nation’s schoolteachers who teach the metric system to millions of children who currently don’t have that learning reinforced outside the classroom. This is an issue worthy of attention according to one recent study by mathematics teachers who found that American students have difficulty using what they learn because of the failure to have “the opportunity to experience the metric system in and out of school is a major factor.” It has been said more than once that math and measurement skills are a national resource that we must both enhance and use to keep America’s technology and science the best in the world. To that end we believe this effort will return benefits beyond those listed above for businesses.

Perhaps one of the clearest arguments for and latest recognition of the need for the United States to increase its everyday use of the metric system is found in an editorial by Thomas G. Dolan, Editorial Page Editor for *Barron’s* in its November 25, 2002, edition. In his editorial entitled “Measure for Measure” he says “there are few places in the economy where the government can actually legislate American efficiency. The system of weights and measures is one of them. Congress can and should convert the country to the metric system.”

**Proving that Voluntary Metric Conversion Can Work**

Amending the FPLA to permit metric-only labeling would show that Congress’s decision in 1975 to adopt a voluntary approach to metric conversion for the United States can and will work. Congress adopted that approach to allow the marketplace to decide when and where to implement the use of metric units because it can be done with the greatest efficiency and lowest cost when it is accomplished in coordination with routine revisions of packaging and labeling and with the introduction of new products or marketing initiatives. As long as there are legal or regulatory barriers to voluntary conversion to the metric system, we will need to continue to expend resources in working to have them changed so that the voluntary conversion works as it was intended and so that the benefits described above can be realized.

# Appendix A. European Union Letter regarding Metric-Only Labeling Directive



# Appendix B. The Fair Packaging and Labeling Act

# with

# Proposed Amendments Shown in Context.

**TITLE 15 - COMMERCE AND TRADE -- CHAPTER 39 - FAIR PACKAGING AND LABELING PROGRAM**

**§1451. Congressional Delegation of Policy.**

Informed consumers are essential to the fair and efficient functioning of a free market economy. Packages and their labels should enable consumers to obtain accurate information as to the quantity of the contents and should facilitate value comparisons. Therefore, it is hereby declared to be the policy of the Congress to assist consumers and manufacturers in reaching these goals in the marketing of consumer goods.

**§1452. Unfair and Deceptive Packaging and Labeling: Scope of Prohibition.**

(a) Nonconforming labels - It shall be unlawful for any person engaged in the packaging or labeling of any consumer commodity (as defined in this chapter) for distribution in commerce, or for any person (other than a common carrier for hire, a contract carrier for hire, or a freight forwarder for hire) engaged in the distribution in commerce of any packaged or labeled consumer commodity, to distribute or to cause to be distributed in commerce any such commodity if such commodity is contained in a package, or if there is affixed to that commodity a label, which does not conform to the provisions of this chapter and of regulations promulgated under the authority of this chapter.

(b) Exemptions - The prohibition contained in subsection (a) of this section shall not apply to persons engaged in business as wholesale or retail distributors of consumer commodities except to the extent that such persons (1) are engaged in the packaging or labeling of such commodities, or (2) prescribe or specify by any means the manner in which such commodities are packaged or labeled.

**§1453. Requirements of Labeling; Placement, Form, and Contents of Statement of Quantity; Supplemental Statement of Quantity.**

(a) Contents of label - No person subject to the prohibition contained in section 1452 of this title shall distribute or cause to be distributed in commerce any packaged consumer commodity unless in conformity with regulations which shall be established by the promulgating authority pursuant to section 1455 of this title which shall provide that -

(1) The commodity shall bear a label specifying the identity of the commodity and the name and place of business of the manufacturer, packer, or distributor;

(2) The net quantity of contents (in terms of weight or mass, measure, or numerical count) shall be separately and accurately stated in a uniform location upon the principal display panel of that label:

(A) using the most appropriate unit of the metric system of measurement and the inch-pound measurement equivalent, except as provided in paragraph (6) of this subsection; or

(B) using only the most appropriate units of the metric system of measurement.

~~(2) The net quantity of contents (in terms of weight or mass, measure, or numerical count) shall be separately and accurately stated in a uniform location upon the principal display panel of that label, using the most appropriate units of both the customary inch/pound system of measure, as provided in paragraph (3) of this subsection, and except as provided in paragraph (3)(A)(ii) or paragraph (6) of this subsection, the SI metric system.~~

(3) The separate label statement of net quantity of contents appearing upon or affixed to any package -

(A) for those portions of the net quantity of contents statement using inch-pound units,

(i) if on a package labeled in terms of weight, shall be expressed in pounds, with any remainder in terms of ounces or common or decimal fractions of the pound; or in the case of liquid measure, in the largest whole unit (quarts, quarts and pints, or pints, as appropriate) with any remainder in terms of fluid ounces or common or decimal fractions of the pint or quart;

(ii) if on a random package, may be expressed in terms of pounds and decimal fractions of the pound carried out to not more than three decimal places; ~~and is not required to, but may include a statement in terms of the SI metric system carried out to not more than three decimal places~~

(iii) if on a package labeled in terms of linear measure, shall be expressed in terms of the largest whole unit (yards, yards and feet, or feet, as appropriate) with any remainder in terms of inches or common or decimal fractions of the foot or yard;

(iv) if on a package labeled in terms of measure of area, shall be expressed in terms of the largest whole square unit (square yards, square yards and square feet, or square feet, as appropriate) with any remainder in terms of square inches or common or decimal fractions of the square foot or square yard;

(B) shall appear in conspicuous and easily legible type in distinct contrast (by topography, layout, color, embossing, or molding) with other matter on the package;

(C) shall contain letters or numerals in a type size which shall be (i) established in relationship to the area of the principal display panel of the package, and (ii) uniform for all packages of substantially the same size; and

(D) shall be so placed that the lines of printed matter included in that statement are generally parallel to the base on which the package rests as it is designed to be displayed; and

(4) The label of any package of a consumer commodity which bears a representation as to the number of servings of such commodity contained in such package shall bear a statement of the net quantity (in terms of weight or mass, measure, or numerical count) of each such serving.

(5) For purposes of paragraph (3)(A)(ii) and paragraph (6) of this subsection the term ''random package'' means a package which is one of a lot, shipment, or delivery of packages of the same consumer commodity with varying weights or masses, that is, packages with no fixed weight or mass pattern.

(6) The net quantity of contents statement for foods that are packaged at the retail store level and for random packages shall be expressed using one of three possible regimes: using only the most appropriate units of the metric system, using only the most appropriate inch-pound units, or using both the metric units and inch-pound units.

~~(6) The requirement of paragraph (2) that the statement of net quantity of contents include a statement in terms of the SI metric system shall not apply to foods that are packaged at the retail store level.~~

(b) Supplemental statements

No person subject to the prohibition contained in section 1452 of this title shall distribute or cause to be distributed in commerce any packaged consumer commodity if any qualifying words or phrases appear in conjunction with the separate statement of the net quantity of contents required by subsection (a) of this section, but nothing in this subsection or in paragraph (2) of subsection (a) of this section shall prohibit supplemental statements, at other places on the package, describing in nondeceptive terms the net quantity of contents: Provided, That such supplemental statements of net quantity of contents shall not include any term qualifying a unit of weight or mass, measure, or count that tends to exaggerate the amount of the commodity contained in the package.

**§1454. Rules and Regulations.**

(a) Promulgating authority - The authority to promulgate regulations under this chapter is vested in (A) the Secretary of Health and Human Services (referred to hereinafter as the ''Secretary'') with respect to any consumer commodity which is a food, drug, device, or cosmetic, as each such term is defined by section 321 of title 21; and (B) the Federal Trade Commission (referred to hereinafter as the ''Commission'') with respect to any other consumer commodity.

(b) Exemption of commodities from regulations - If the promulgating authority specified in this section finds that, because of the nature, form, or quantity of a particular consumer commodity, or for other good and sufficient reasons, full compliance with all the requirements otherwise applicable under section 1453 of this title is impracticable or is not necessary for the adequate protection of consumers, the Secretary or the Commission (whichever the case may be) shall promulgate regulations exempting such commodity from those requirements to the extent and under such conditions as the promulgating authority determines to be consistent with section 1451 of this title.

(c) Scope of additional regulations - Whenever the promulgating authority determines that regulations containing prohibitions or requirements other than those prescribed by section 1453 of this title are necessary to prevent the deception of consumers or to facilitate value comparisons as to any consumer commodity, such authority shall promulgate with respect to that commodity regulations effective to -

(1) establish and define standards for characterization of the size of a package enclosing any consumer commodity, which may be used to supplement the label statement of net quantity of contents of packages containing such commodity, but this paragraph shall not be construed as authorizing any limitation on the size, shape, weight or mass, dimensions, or number of packages which may be used to enclose any commodity;

(2) regulate the placement upon any package containing any commodity, or upon any label affixed to such commodity, of any printed matter stating or representing by implication that such commodity is offered for retail sale at a price lower than the ordinary and customary retail sale price or that a retail sale price advantage is accorded to purchasers thereof by reason of the size of that package or the quantity of its contents;

(3) require that the label on each package of a consumer commodity (other than one which is a food within the meaning of section 321(f) of title 21) bear (A) the common or usual name of such consumer commodity, if any, and (B) in case such consumer commodity consists of two or more ingredients, the common or usual name of each such ingredient listed in order of decreasing predominance, but nothing in this paragraph shall be deemed to require that any trade secret be divulged; or

(4) prevent the nonfunctional-slack-fill of packages containing consumer commodities. For purposes of paragraph (4) of this subsection, a package shall be deemed to be nonfunctionally slack-filled if it is filled to substantially less than its capacity for reasons other than (A) protection of the contents of such package or (B) the requirements of machines used for enclosing the contents in such package.

(d) Development by manufacturers, packers, and distributors of voluntary product standards - Whenever the Secretary of Commerce determines that there is undue proliferation of the weights or masses, measures, or quantities in which any consumer commodity or reasonably comparable consumer commodities are being distributed in packages for sale at retail and such undue proliferation impairs the reasonable ability of consumers to make value comparisons with respect to such consumer commodity or commodities, he shall request manufacturers, packers, and distributors of the commodity or commodities to participate in the development of a voluntary product standard for such commodity or commodities under the procedures for the development of voluntary products standards established by the Secretary pursuant to section 272 of this title. Such procedures shall provide adequate manufacturer, packer, distributor, and consumer representation.

(e) Report and recommendations to Congress upon industry failure to develop or abide by voluntary product standards - If (1) after one year after the date on which the Secretary of Commerce first makes the request of manufacturers, packers, and distributors to participate in the development of a voluntary product standard as provided in subsection (d) of this section, he determines that such a standard will not be published pursuant to the provisions of such subsection (d), or (2) if such a standard is published and the Secretary of Commerce determines that it has not been observed, he shall promptly report such determination to the Congress with a statement of the efforts that have been made under the voluntary standards program and his recommendation as to whether Congress should enact legislation providing regulatory authority to deal with the situation in question.

**§1455. Procedures for Promulgation of Regulations.**

(a) Hearings by Secretary of Health and Human Services - Regulations promulgated by the Secretary under section 1453 or 1454 of this title shall be promulgated, and shall be subject to judicial review, pursuant to the provisions of subsections (e), (f), and (g) of section 371 of title 21. Hearings authorized or required for the promulgation of any such regulations by the Secretary shall be conducted by the Secretary or by such officer or employees of the Department of Health and Human Services as he may designate for that purpose.

(b) Judicial review; hearings by Federal Trade Commission - Regulations promulgated by the Commission under section 1453 or 1454 of this title shall be promulgated, and shall be subject to judicial review, by proceedings taken in conformity with the provisions of subsections (e), (f), and (g) of section 371 of title 21 in the same manner, and with the same effect, as if such proceedings were taken by the Secretary pursuant to subsection (a) of this section. Hearings authorized or required for the promulgation of any such regulations by the Commission shall be conducted by the Commission or by such officer or employee of the Commission as the Commission may designate for that purpose.

(c) Cooperation with other departments and agencies - In carrying into effect the provisions of this chapter, the Secretary and the Commission are authorized to cooperate with any department or agency of the United States, with any State, Commonwealth, or possession of the United States, and with any department, agency, or political subdivision of any such State, Commonwealth, or possession.

(d) Returnable or reusable glass containers for beverages - No regulation adopted under this chapter shall preclude the continued use of returnable or reusable glass containers for beverages in inventory or with the trade as of the effective date of this Act, nor shall any regulation under this chapter preclude the orderly disposal of packages in inventory or with the trade as of the effective date of such regulation.

**§1456.Enforcement.**

(a) Misbranded consumer commodities - Any consumer commodity which is a food, drug, device, or cosmetic, as each such term is defined by section 201 of the Federal Food, Drug, and Cosmetic Act

(21 US C. 321), and which is introduced or delivered for introduction into commerce in violation of any of the provisions of this chapter, or the regulations issued pursuant to this chapter, shall be deemed to be misbranded within the meaning of chapter III of the Federal Food, Drug, and Cosmetic Act (21 USC 331 et seq.), but the provisions of section 303 of that Act (21 USC. 333) shall have no application to any violation of section 1452 of this title.

(b) Unfair or deceptive acts or practices in commerce - Any violation of any of the provisions of this chapter, or the regulations issued pursuant to this chapter, with respect to any consumer commodity which is not a food, drug, device, or cosmetic, shall constitute an unfair or deceptive act or practice in commerce in violation of section 45(a)of this title and shall be subject to enforcement under section 45(b) of this title.

(c) Imports - In the case of any imports into the United Statesof any consumer commodity covered by this chapter, the provisions of sections 1453 and 1454 of this title shall be enforced by the Secretary of the Treasury pursuant to section 801(a) and (b) of the Federal Food, Drug, and Cosmetic Act (21 USC. 381).

**§1457. Annual Reports to Congress: Submission Dates.**

Each officer or agency required or authorized by this chapter to promulgate regulations for the packaging or labeling of any consumer commodity, shall transmit to the Congress each year a report containing a full and complete description of the activities of that officer or agency for the administration and enforcement of this chapter during the preceding fiscal year. All agencies except the Department of Health and Human Services and the Federal Trade Commission shall submit their reports in January of each year. The Department of Health and Human Services shall include this report in its annual report to Congress on activities under the Federal Food, Drug, and Cosmetic Act (21 USC. 301 et seq.), and the Federal Trade Commission shall include this report in the Commission's annual report to Congress.

**§1458. Cooperation with State Authorities; Transmittal of Regulations to States; Noninterference with Existing Programs.**