

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 247**

[SWH-FRL-6151-8]

RIN 2050-AE23

**Comprehensive Guideline for Procurement of Products Containing Recovered Materials**

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA or the Agency) today is proposing an amendment to the May 1, 1995 Comprehensive Procurement Guideline (CPG). EPA is proposing to designate the following 19 new items that are or can be made with recovered materials: nylon carpet with backing containing recovered materials, carpet cushion, flowable fill, railroad grade crossing surfaces, park and recreational furniture, playground equipment, food waste compost, plastic lumber landscaping timbers and posts, solid plastic binders, plastic clipboards, plastic file folders, plastic clip portfolios, plastic presentation folders, absorbents and adsorbents, awards and plaques, industrial drums, mats, signage, and manual-grade strapping.

The CPG implements section 6002 of the Resource Conservation and Recovery Act (RCRA), which requires EPA to designate items that are or can be made with recovered materials and to recommend practices for the procurement of designated items by procuring agencies. Once EPA

designates an item, RCRA requires any procuring agency using appropriated Federal funds to procure that item to purchase it with the highest percentage of recovered materials practicable. Today's proposed action will foster markets for materials recovered from solid waste by using government purchasing power to stimulate the use of these materials in the manufacture of new products.

**DATES:** EPA will accept public comments on this proposed rule until October 26, 1998.

**ADDRESSES:** To comment on this proposal, please send an original and two copies of comments to: RCRA Information Center (5305W), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. Please place the docket number F-98-CP3P-FFFFF on your comments.

If any information is confidential, it should be identified as such. An original and two copies of Confidential Business Information (CBI) must be submitted under separate cover to: Document Control Officer (5305W), Office of Solid Waste, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

Documents related to today's proposal are available for viewing at the RCRA Information Center (RIC), located at: U.S. Environmental Protection Agency, 1235 Jefferson Davis Highway, Ground Floor, Crystal Gateway One, Arlington, VA 22202. The RIC is open from 9 a.m. to 4 p.m. Monday through Friday, except for Federal holidays. The public must make an appointment to review docket materials. Call (703) 603-9230

for appointments. Copies cost \$.15 per page.

**FOR FURTHER INFORMATION CONTACT:** For general information contact the RCRA Hotline at (800) 424-9346 or TDD (800) 553-7672 (hearing impaired). In the Washington, DC metropolitan area, call (703) 412-9810 or TDD (703) 412-3323. For technical information on individual item designations, contact Terry Grist at (703) 308-7257.

**SUPPLEMENTARY INFORMATION:****Regulated Entities**

This action may potentially affect those "procuring agencies"—a term defined in RCRA section 1004(17)—that purchase the following: nylon carpet, carpet cushion, flowable fill, railroad grade crossing surfaces, park and recreational furniture, playground equipment, food waste compost, landscaping timbers and posts, binders, clipboards, file folders, clip portfolios, presentation folders, absorbents and adsorbents, industrial drums, awards and plaques, mats, signage, and manual-grade strapping. For purposes of RCRA section 6002, procuring agencies include the following: (1) any Federal agency; (2) any State or local agencies using appropriated Federal funds for a procurement; or (3) any contractors with these agencies (with respect to work performed under the contract). The requirements of section 6002 apply to such procuring agencies only when procuring designated items where the price of the item exceeds \$10,000 or the quantity of the item purchased in the previous year exceeded \$10,000. Potential regulated entities for this rule are shown in Table 1.

TABLE 1.—ENTITIES POTENTIALLY SUBJECT TO SECTION 6002 REQUIREMENTS TRIGGERED BY CPG AMENDMENTS

Category	Examples of regulated entities
Federal Government .....	Federal departments or agencies that procure \$10,000 or more worth of a designated item in a given year.
State Government .....	A State agency that uses appropriated Federal funds to procure \$10,000 or more worth of a designated item in a given year.
Local Government .....	A local agency that uses appropriated Federal funds to procure \$10,000 or more worth of a designated item in a given year.
Contractor .....	A contractor working on a project funded by appropriated Federal funds that purchases \$10,000 or more worth of a designated item in a given year.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists the types of entities of which EPA is now aware that could potentially be subject to regulatory requirements triggered by this action. To determine whether your procurement practices are affected by this action, you should

carefully examine the applicability criteria in 40 CFR § 247.2. If you have questions regarding the applicability of this action to a particular entity, consult the individuals listed in the preceding section.

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  - E. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
  - F. The National Technology Transfer and Advancement Act
  - G. Executive Order 13084
- XII. Supporting Information and Accessing Internet

## I. Authority

This guideline is proposed under the authority of sections 2002(a) and 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended;

42 U.S.C. 6912(a) and 6962; and section 502 of Executive Order 12873, "Federal Acquisition, Recycling, and Waste Prevention" (58 FR 54911, October 22, 1993).

## II. Background

Section 6002(e) of RCRA requires EPA to designate items that are or can be made with recovered materials and to recommend practices to assist procuring agencies in meeting their obligations with respect to designated items under RCRA section 6002. After EPA designates an item, RCRA requires that each procuring agency, when purchasing a designated item, must purchase that item composed of the highest percentage of recovered materials practicable.

Executive Order 12873 (Executive Order) establishes the procedure for EPA to follow in implementing RCRA section 6002(e). Section 502 of the Executive Order directs EPA to issue a Comprehensive Procurement Guideline (CPG) that designates items that are or can be made with recovered materials. Concurrent with the CPG, EPA must publish its recommended procurement practices for purchasing designated items, including recovered materials content levels, in a related Recovered Materials Advisory Notice (RMAN). The Executive Order also directs EPA to update the CPG annually and to issue RMANs periodically to reflect changing market conditions. The first CPG (CPG I) was published on May 1, 1995 (60 FR 21370). It established 8 product categories, designated 19 new items, and consolidated 5 earlier item designations. The first CPG update (CPG II) was published on November 13, 1997 (62 FR 60962), and designated an additional 12 products.

Today, in CPG III, EPA is proposing to designate the following 19 additional items:

### Construction Products

Nylon carpet with backing containing recovered materials  
 Carpet cushion  
 Flowable fill  
 Railroad grade crossing surfaces

### Park and Recreation Products

Park benches and picnic tables  
 Playground equipment

### Landscaping Products

Food waste compost  
 Plastic lumber landscaping timbers and posts

### Non-Paper Office Products

Solid plastic binders  
 Plastic clipboards

Plastic file folders  
 Plastic clip portfolios  
 Plastic presentation folders

### Miscellaneous

Absorbents and adsorbents  
 Industrial drums  
 Awards and plaques  
 Mats  
 Non-road signs, including sign supports and posts  
 Manual-grade strapping

### A. Criteria for Selecting Items for Designation

While not limiting consideration to these criteria, RCRA section 6002(e) requires EPA to consider the following when determining which items it will designate:

- (1) Availability of the item;
- (2) Potential impact of the procurement of the item by procuring agencies on the solid waste stream;
- (3) Economic and technological feasibility of producing the item; and
- (4) Other uses for the recovered materials used to produce the item.

EPA consulted with Federal procurement and requirement officials to identify other criteria to consider when selecting items for designation. Based on these discussions, the Agency concluded that the limitations set forth in RCRA section 6002(c) should also be factored into its selection decisions. This provision requires each procuring agency that procures an item designated by EPA to procure the item composed of the highest percentage of recovered materials practicable, while maintaining a satisfactory level of competition. A procuring agency, however, may decide not to procure an EPA-designated item containing recovered materials if it determines: (1) the item is not reasonably available within a reasonable period of time, (2) the item fails to meet the performance standards set forth in the agency's specification, or (3) the item is available only at an unreasonable price.

EPA recognized that the above criteria limit the conditions under which procuring agencies must purchase EPA-designated items with recovered materials content, and, thereby, could limit the potential impact of an individual item designation. (The limitations of RCRA section 6002(c) also effectively describe the circumstances in which a designated item is "available" for purposes of the statute.) For these reasons, EPA is also taking into account the limitations cited in RCRA section 6002(c) in its selection of items for designation in today's proposed CPG III. Thus, the Agency developed the following criteria for use in selecting

items for designation: use of materials found in solid waste, economic and technological feasibility and performance, impact of government procurement, availability and competition, and other uses for recovered materials. These criteria are discussed in detail in Section II of the document entitled, "Background Document for Proposed CPG III and Draft RMAN III." A copy of this document is included in the RCRA public docket for this rule.

EPA has adopted two approaches in its designation of items that are made with recovered materials. For some items, such as paper and paper products, the Agency designates broad categories of items and provides information in the related RMAN as to their appropriate applications or uses. For other items, such as plastic trash bags, EPA designates specific items, and, in some instances, includes in the designation the specific types of recovered materials or applications to which the designation applies. The Agency explained these approaches to designating items in the preamble to CPG I (60 FR 21373, May 1, 1995).

EPA sometimes had information on the availability of a particular item made with a specific recovered material (e.g., plastic), but no information on the availability of the item made from a different recovered material or any indication that it is possible to make the item with a different recovered material. In these instances, EPA concluded that it was appropriate to include the specific material in the item designation in order to provide vital information to procuring agencies as they seek to fulfill their obligations to purchase designated items composed of the highest percentage of recovered materials practicable. This information enables the agencies to focus their efforts on products that are currently available for purchase, reducing their administrative burden. EPA also included information in the proposed CPG, as well as in the draft RMAN that accompanied the proposed CPG, that advised procuring agencies that EPA is not recommending the purchase of an item made from one particular material over a similar item made from another material. For example, EPA included the following statement in the preamble discussion for plastic desktop accessories (59 FR 18879, April 20, 1994): "This designation does not preclude a procuring agency from purchasing desktop accessories manufactured from another material, such as wood. It simply requires that a procuring agency, when purchasing plastic desktop accessories, purchase these accessories made with recovered materials \* \* \*"

The Agency understands that some procuring agencies may erroneously believe that the designation of a broad category of items in a CPG requires them (1) to procure all items included in such

category with recovered materials content and (2) to establish an affirmative procurement program for the entire category of items, even where specific items within the category may not meet current performance standards. This is clearly not required under RCRA as implemented through the CPGs and RMANs. RCRA section 6002 does not require a procuring agency to purchase items with recovered materials content that are not available or that do not meet a procuring agency's specifications or reasonable performance standards for the contemplated use. Further, section 6002 does not require a procuring agency to purchase such items if the item with recovered materials content is only available at an unreasonable price or the purchase of such item is inconsistent with maintaining a reasonable level of competition. However, EPA stresses that, when procuring any product for which a recovered materials alternative is available that meets the procuring agency's performance needs, if all other factors are equal, the procuring agency should seek to purchase the product made with the highest percentage of recovered materials practicable.

The items proposed for designation today have all been evaluated with respect to the EPA's criteria. Details of these evaluations are discussed in Sections V–X of the "Supporting Analyses" background document. Sections IV–VIII of this preamble provide a summary of EPA's rationale for designating these items.

#### *B. Request for Comments*

EPA requests comments and information throughout this preamble. In general, the Agency is requesting comments on: (1) the items selected for designation and (2) the accuracy of the information presented in the discussions of the basis of the item designations. Requests for specific comments and information are included in the narrative discussions for each of the designated items, which follow in sections IV through VIII.

EPA also is requesting comment on the draft RMAN III published in the notice section of today's **Federal Register**. It recommends recovered materials content levels and procurement methods for each of the items EPA proposes to designate today.

Section 503 of E.O. 12873 directs EPA to issue guidance that recommends principles that Executive agencies should use in making determinations for the preference and purchase of environmentally preferable products (EPP). On September 29, 1995, EPA issued guides on environmentally

preferable product purchasing (see 60 FR 50721–50735) and has undertaken a series of case studies on various products to identify multi-faceted environmental performance characteristics and attributes that should be considered when purchasing products that are considered environmentally preferable. The agency is interested in identifying environmental attributes considered important when buying environmentally preferable sorbent materials (i.e., absorbents and adsorbents) and is requesting comments in this regard in today's notice.

Specifically, the Agency is interested in developing an approach for presenting information related to the reusability of sorbents and the disposal options for sorbents. Information on reusability and disposal is relevant to the environmental impact of sorbents and is of interest to many purchasers, but the interpretation of information on these attributes is often complicated by the specific circumstances of the user. The Agency would appreciate ideas on how standard measures or descriptors for reusability and disposal could be coupled with appropriate qualifiers and other explanatory materials to convey useful information to purchasers. Commenters should take note that this request is for information pertaining to the Agency's EPP program and that information obtained through this request is not in any way related to, nor will it be used for the purposes of today's proposed designation of sorbents under the CPG. Information obtained by this request will be used to help the agency evaluate the appropriateness of issuing future guidance on the environmental attributes of sorbents under the Agency's program for EPP.

#### *C. Additional Information*

For additional background information, including information on RCRA requirements, Executive Order directives, the criteria and methodology for selecting the proposed designated items, and a list of other items considered for designation, please consult "Background Document for Proposed CPG III and Draft RMAN III." Information on obtaining this background document is provided in Section XII, Supporting Information and Accessing Internet.

### **III. Definitions**

For several items being proposed for designation, EPA recommends two-part content levels in the draft RMAN III—a postconsumer recovered content component and a total recovered

materials component. In these instances, EPA found that both types of materials were being used to manufacture a product. Recommending only postconsumer content levels would fail to acknowledge the contribution to the reduction in solid waste made by the use by one manufacturer of another manufacturers' byproducts as feedstock.

Because the item designations in today's action use the terms "postconsumer materials" and "recovered materials," the definitions for these terms are repeated here as a reference for the convenience of the reader. These definitions can be found in 40 CFR 247.3. The Agency is not proposing to change these definitions and will not consider any comments submitted on these terms.

*Postconsumer materials* means a material or finished product that has served its intended end use and has been diverted or recovered from waste destined for disposal, having completed its life as a consumer item. Postconsumer material is part of the broader category of recovered materials.

*Recovered materials* means waste materials and byproducts that have been recovered or diverted from solid waste, but such term does not include those materials and byproducts generated from, and commonly reused within an original manufacturing process.

#### IV. Construction Products

##### A. Nylon Carpet With Backing Containing Recovered Materials

The information obtained by EPA demonstrates that nylon carpet tiles and broadloom carpet made with backing containing recovered materials are commercially available. Today, in § 247.12(h), EPA proposes to designate nylon carpet (broadloom and tiles) made with backing containing recovered materials as an item whose procurement will carry out the objectives of section 6002 of RCRA.

A final designation would not preclude a procuring agency from purchasing broadloom carpet or carpet tiles made from other materials, such as wool. It simply requires that a procuring agency, when purchasing nylon carpet tiles or nylon broadloom carpet, purchase these items with backing containing recovered materials when they meet applicable specifications and performance requirements. EPA reminds procuring agencies, however, that the Agency had previously designated polyester carpet for use in low- and medium-wear applications. See 60 FR 21370, May 1, 1995.

EPA is not aware of manufacturers of other types of carpet (e.g., wool, polyester) using backing containing recovered materials. For this reason, EPA is limiting the scope of today's proposed designation to nylon carpet.

EPA requests information about manufacturers of other types of carpet using recycled-content backing.

##### 1. Background

Carpet backing is a layer of woven or nonwoven material used to hold carpet fibers in place and provide structural support. Broadloom carpet, meaning roll goods in 12-foot widths, for wall-to-wall installation, generally is comprised of face fibers inserted into a primary backing, which is usually made of polypropylene materials. The fibers are then locked or glued into place by a layer of latex adhesive. A secondary backing made of polypropylene or jute fiber then is applied to provide stability. Carpet squares or tiles are manufactured first as broadloom carpet. A sheet made of polypropylene or other material is added for stability, and a secondary backing made of polyvinyl chloride (PVC), polyurethane, or other hardback material is applied. The carpet is then cut into squares, usually 18" × 18". The tiles are used in modular flooring systems, such as in office settings, and can offer more flexibility than broadloom carpet because individual tiles can be replaced when they become worn.

When EPA proposed to designate carpet in the 1994 CPG I, the Agency had identified only one manufacturer using recovered materials to make carpet backing, and this company used its own manufacturing scrap. EPA stated that it was not considering carpet backing for designation because only one manufacturer had been identified. See 59 FR 18873, April 20, 1994.

Since then, a carpet manufacturer has developed a process to use material from old carpet to produce new backing for its nylon carpet tiles and broadloom carpet. Both the carpet tiles and broadloom carpet made with backing containing recovered materials are now commercially available and are sold at the same price as conventional nylon carpet tiles and nylon broadloom carpet.

##### 2. Rationale for Designation

EPA believes that nylon carpet tiles and broadloom carpet made with backing containing recovered materials meet the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* Carpets and rugs account for 2.2 million tons, or 1.1% of municipal solid waste generated annually. About 2 pounds of recovered materials can be used in the backing for each carpet tile. Thus, for each 1,000 square yards of carpet tiles with recovered-content backing purchased, approximately 2,000 pounds

of materials are diverted from the waste stream.

b. *Technically proven uses.* One manufacturer has developed the technology to use recovered carpet to manufacture new PVC carpet backing, and at least two other manufacturers are experimenting with using recovered materials in vinyl backing. According to the manufacturer, recovered-content PVC carpet backing performs as well as virgin backing and meets the company's performance specifications. The manufacturer provides a 15-year warranty with the product and plans to use the recovered-content backing as its standard tile backing.

Nylon broadloom carpet and carpet tiles made with recovered-content backing are available nationally. This item also is available to Federal agencies through the U.S. General Services Administration's (GSA) contract GS-00F-8453-A.

Recovered materials can be used only in PVC backing at this time. Manufacturers of polypropylene primary and secondary backings have found it to be technologically and economically infeasible to manufacture carpet backing with recycled polypropylene at this time. EPA requests current information from manufacturers of polypropylene backings on the technological feasibility of using recovered materials in their backings.

c. *Impact of government procurement.* Although EPA was not able to obtain any quantitative information, virtually all government agencies purchase broadloom carpet and/or carpet tiles. Use of broadloom carpet and carpet tiles made with recovered content backing will create a market for this item and demonstrate its performance.

##### 3. Preference Program

EPA recognizes that the choice of carpet fiber—wool, nylon, polyester—depends on the performance needs for a given application. EPA is not requiring procuring agencies to limit their choices to polyester carpet containing recovered materials or to nylon carpet made with backing containing recovered materials. Rather, the effect of the previous designation of polyester carpet and today's proposed designation of nylon carpet with backing containing recovered materials is to require procuring agencies to determine their performance needs, determine whether carpet products containing recovered materials meet those needs, and to purchase carpet products containing recovered materials to the maximum extent practicable, as required by RCRA section 6002.

### B. Carpet Cushion

The information obtained by EPA demonstrates that bonded polyurethane foam carpet cushion, carpet cushion made from jute and synthetic fibers, and rubber carpet cushion containing recovered materials are commercially available. Today, in § 247.12(I), EPA proposes to designate carpet cushion made from bonded polyurethane, jute, synthetic fibers, or rubber containing recovered materials as an item whose procurement will carry out the objectives of section 6002 of RCRA.

A final designation would not preclude a procuring agency from purchasing carpet cushion made from other types of materials, such as prime polyurethane foam. It simply requires that a procuring agency, when purchasing bonded polyurethane, jute, synthetic fiber, or rubber carpet cushion, purchase this item containing recovered materials when it meets applicable specifications and performance requirements.

#### 1. Background

Carpet cushion, also known as carpet underlay, is padding placed beneath carpet. Carpet cushion improves the acoustical and thermal insulation properties of carpet, reduces the impact caused by foot traffic or furniture indentation, enhances comfort, and prolongs appearance. It is available in a variety of thicknesses and is used in both residential and commercial settings. Cushions made from bonded polyurethane, jute, synthetic fiber, and rubber can be made with recovered materials.

When EPA proposed to designate carpet in the 1994 CPG I, the Agency was aware of only one manufacturer using recovered materials to make carpet cushion. EPA stated that it was not considering carpet cushion for designation because only one manufacturer had been identified. See 59 FR 18873, April 20, 1994. EPA has now identified at least 12 manufacturers of carpet cushion containing recovered materials.

#### 2. Rationale for Designation

EPA believes that carpet cushion containing recovered materials meets the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* About 70 percent of all bonded polyurethane is made from recovered materials, including postconsumer recovered carpet cushion. Jute carpet cushion can be made from postconsumer burlap. Synthetic fiber cushions are made from 100 percent

recovered scrap from the carpet fabrication process or purchased from processors. Rubber carpet cushions contain up to 90 percent postconsumer rubber from old tires. Thus, procurement of carpet cushion containing recovered materials can create markets for postconsumer carpet cushion, burlap, and tire rubber, as well as carpet manufacturing scrap.

b. *Technically proven uses.* At least 12 companies manufacture carpet cushion from recovered materials. According to the manufacturers, their products perform as well as carpet cushions made with virgin materials in terms of cushioning and durability and meet standards set by the Carpet and Rug Institute and the Carpet Cushion Council. These standards include requirements for density, thickness, tensile strength, and elongation.

The manufacturers distribute their products nationwide through distributors. Additionally, GSA offers urethane, jute, synthetic fiber, and rubber carpet cushions through its carpet schedule.

c. *Impact of government procurement.* Although not all government agencies use carpet cushion, GSA informed EPA that Federal agencies spent slightly more than \$1 million on carpet cushion between October 1992 and May 1997. Federal agencies purchase carpet cushion either directly or through the GSA schedule. Use of carpet cushion containing recovered materials, particularly postconsumer materials, will expand markets for this item and, thereby, create additional markets for the recovered materials used by the carpet cushion manufacturers.

#### C. Flowable Fill

The information obtained by EPA demonstrates that flowable fill (or controlled low-strength materials) containing coal fly ash and/or ferrous foundry sands are commercially available. Today, in § 247.12(j), EPA proposes to designate flowable fill containing coal fly ash and/or ferrous foundry sands as an item whose procurement will carry out the objectives of section 6002 of RCRA. A final designation would not preclude a procuring agency from purchasing other types of fill materials, such as conventional concrete or compacted soil. It simply requires that a procuring agency, when purchasing or contracting for the use of flowable fill, purchase this item containing recovered materials when it meets applicable specifications and performance requirements.

EPA is aware of one manufacturer using ground blast furnace slag in flowable fills. Because EPA has only

limited information from one company on the use of ground blast furnace slag in flowable fill applications, the Agency is not proposing to designate this item in today's notice. However, EPA requests information on (1) other manufacturers or users of flowable fills containing blast furnace slag and (2) the performance and availability of this item.

#### 1. Background

Flowable fill, or controlled low-strength material, is a wet, flowable slurry that is used as an economical fill or backfill material. Flowable fill flows like a liquid, sets like a solid, is self-leveling, and requires no compaction or vibration to achieve maximum density. It can take the place of concrete, compacted soils, or sand commonly used to fill around pipes and in utility trenches or other void areas. Although it can replace concrete, flowable fill is not considered to be a low strength concrete or a compacted soil-cement. Other names for flowable fill include flowable mortar, controlled low-strength material, lean mix backfill, lean fill, controlled density fill, unshrinkable fill, flowable fly ash, hydraulic cement, low strength slurry backfill, flowable backfill, and flowable grout.

Applications for flowable fill include backfill in sewer and utility trenches, building excavations, bridge abutments, and conduit trenches; and miscellaneous uses such as retaining wall backfill and filling abandoned wells, sewers, manholes, and underground storage tanks.

Because it does not require compaction or vibration, flowable fill can be a cost-effective fill material. According to the American Concrete Institute, advantages of flowable fill include reduced labor and equipment requirements because it is self-leveling; versatility in terms of flowability, strength, and setting times; higher load-carrying capacity than compacted soil or granular fill; reduced excavation costs; and improved worker safety because flowable fill can be placed without workers entering the trench.<sup>1</sup>

#### 2. Rationale for Designation

EPA believes that flowable fill containing recovered materials meets the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* The two primary recovered materials used in flowable fill are coal fly ash and spent ferrous foundry sands. Only 25 percent

<sup>1</sup> ACI 229R-94, "Controlled Low Strength Materials (CLSM)," American Concrete Institute, December 1994.

of the coal fly ash and 20 percent of the foundry sand generated annually currently are recovered and used. Therefore, EPA believes it is appropriate to develop additional markets for these materials.

Either Class F or Class C coal fly ash can be used in flowable fill. While both ferrous and non-ferrous foundry sands can be used in flowable fill mixtures, typically non-ferrous foundry sands are hazardous waste due to their lead and cadmium content. Accordingly, heavy metal content may preclude their use in flowable fill mixtures. In contrast, ferrous foundry sands are not known to be hazardous waste. For this reason, EPA is limiting today's proposed designation to flowable fill containing ferrous foundry sands.

*b. Technically proven uses.*

Substantial information about using coal fly ash has been accumulated by the Federal Highway Administration and state highway and transportation departments. The American Concrete Institute has developed a specification for flowable fill containing coal fly ash. EPA is aware that both the American Society for Testing and Materials (ASTM) and the American Association of State Highway and Transportation Officials (AASHTO) are developing specifications for flowable fill containing coal fly ash. ASTM has developed several test methods for flowable fill containing coal fly ash. In addition, the American Concrete Institute is revising its report on controlled low strength materials (i.e., flowable fill). These test methods are listed in "Background Document for Proposed CPG III and Draft RMAN III" and Table C-10c of the draft RMAN III published in the Notice section of today's **Federal Register**. In addition, more than 20 states have specifications for flowable fill containing coal fly ash, including California, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Mexico, North Carolina, Ohio, Texas, Washington, West Virginia, and Wisconsin.

There currently are no national test methods or specifications for flowable fill mixtures containing ferrous foundry sand. At least one state, Ohio, has a specification for flowable fill containing foundry sand, and several other states and FHWA are developing specifications or guidelines.

*c. Impact of government procurement.*

State and local transportation departments are one of the largest markets for flowable fill, and they use federal funds for road repair and

construction. Their use of flowable fill containing coal fly ash and/or ferrous foundry sands will create markets for these recovered materials as well as provide additional information about the performance of this product.

Coal fly ash and ferrous foundry sands are not universally available throughout the United States. In addition, in some parts of the U.S., they might not be economically competitive with local fill materials. EPA reminds procuring agencies that, under RCRA section 6002, they are not required to purchase an EPA-designated item containing recovered materials if that item is not reasonably available or only available at an unreasonable price. However, EPA believes that, as procuring agencies learn more about the performance of flowable fill and its positive impact on in-place costs, they will be more willing to use it.

*D. Railroad Grade Crossing Surfaces*

The information obtained by EPA demonstrates that railroad grade crossing surfaces containing recovered materials are commercially available. Today, in § 247.12(k), EPA proposes to designate railroad grade crossing surfaces containing coal fly ash, recovered rubber, or recovered steel as items whose procurement will carry out the objectives of section 6002 of RCRA.

A final designation would not preclude a procuring agency from purchasing railroad grade crossing surfaces manufactured from another material, such as asphalt or wood. It simply requires that a procuring agency, when purchasing concrete, rubber, or steel railroad grade crossing surfaces, purchase these items made with recovered materials when they meet applicable specifications and performance requirements. In particular, EPA is aware that many states have developed guidelines or criteria for use in selecting a crossing surface. Different crossing grade surfaces may be appropriate for different settings, based on highway traffic and functional classification, types of vehicles using the crossing, railroad traffic and truck classification, condition of the approach surface, engineering judgment, costs, and the expected life of the surface.

The information obtained by EPA indicates that it is not feasible to use reclaimed asphalt in asphalt railroad grade surface crossings because asphalt recycling equipment is designed for operation on highways and roads, not on smaller projects such as railroad crossings. EPA does not believe that crumb rubber modified asphalt can be used in railroad grade crossings because of cost and performance constraints.

EPA requests information on the use of either reclaimed asphalt or crumb rubber modified asphalt in railroad grade crossing surfaces.

EPA did not identify any manufacturers using ground granulated blast furnace (GGBF) slag or other recovered materials in concrete railroad grade crossing surfaces. EPA requests information about the feasibility of using GGBF slag or other recovered materials in this application.

Plastic lumber is being used in the manufacture of railroad ties and could be used as a component of grade crossings in the future. Testing of plastic lumber railroad ties at the Association of American Railroads' test track near Pueblo, Colorado currently is underway. Depending on the test results, EPA will consider designating this item in the future.

*1. Background*

Railroad grade crossings are surfacing materials placed between railroad tracks, and between the track and the road at highway and street railroad crossings, to enhance automobile and pedestrian safety. Railroad grade crossings can be made of wood, asphalt, concrete, rubber, metal, or unconsolidated materials, such as crushed stone. Currently, over half of existing railroad grade crossing surfaces are asphalt, followed by wood (32%), unconsolidated materials (10%), rubber (4%), and concrete (2%). However, the use of concrete and rubber surfaces is increasing.

*2. Rationale for Designation*

EPA believes that railroad grade crossing surfaces containing recovered materials meet the statutory criteria for selecting items for designation.

*a. Use of materials in solid waste.* Concrete, rubber, and steel railroad grade crossing surfaces can be made with recovered materials. Concrete railroad grade crossing surfaces can contain coal fly ash, which is either used by the manufacturer of the concrete railroad crossing or by the ready mix concrete company supplying the crossing to distributors. While there are other applications for coal fly ash, including concrete used in highway and building construction, only 25% of the coal fly ash generated annually is recovered. Therefore, EPA believes that other markets for coal fly ash should be developed. Each railroad crossing could use as much as 1.5 tons of coal fly ash.

Rubber railroad grade crossing surfaces contain tire buffings from tire retreading operations, crumb rubber from scrap tires, and off-specification virgin rubber. As with coal fly ash, there

are other uses for scrap tires and other applications for crumb tire rubber. However, additional markets for crumb rubber are needed.

All domestic steel contains recovered materials. Depending on the process used to manufacture the steel, the railroad grade crossing surface can contain up to 100 percent recovered steel.

b. *Technically proven uses.* As discussed in "Background Document for Proposed CPG III and Draft RMAN III," concrete, rubber, and steel railroad grade crossing surfaces containing recovered materials are available and in use throughout the United States. At least two companies use coal fly ash in the manufacture of concrete railroad grade crossing surfaces, and EPA believes that many concrete crossing surface distributors may sell products containing coal fly ash because more than half of the concrete suppliers in the U.S. use coal fly ash. There are three manufacturers of rubber railroad grade crossing surfaces that use tire buffings and/or crumb rubber, while a fourth manufacturer uses off-specification virgin rubber. As previously noted, all steel railroad grade crossing surfaces contain recovered steel.

EPA found conflicting information about the performance of concrete and rubber railroad grade crossing surfaces containing recovered materials. Users generally are satisfied with concrete surfaces. The weight of concrete systems can be a problem during track maintenance, however, although equipment exists to remove the concrete slabs. In addition, as the wooden railroad ties under concrete systems deteriorate over time, the concrete can become unstable. It is believed that, if the performance of plastic lumber railroad ties is proven, their use, in conjunction with concrete surfaces, will eliminate this problem.

Proper installation and the use of full-depth rubber crossings appear to be key factors in the successful use of these items. Rubber crossings also seem to be preferable for roads with lighter traffic flow and lighter vehicles.

Both concrete and rubber railroad grade crossing surfaces can cost more initially than traditional wood or asphalt crossing surfaces but generally last longer and can be reused after track maintenance, which reduces their cost over their life cycle.

EPA did not identify any national specifications or standards that either require or preclude the use of recovered materials in railroad crossings. The ASTM and AASHTO specifications for blended hydraulic cement and the ASTM test methods for coal fly ash can

be used for concrete railroad grade crossings. There are nine ASTM test methods and a classification system for rubber products that can be used when purchasing rubber railroad grade crossing surfaces. These are listed in "Background Document for Proposed CPG III and Draft RMAN III" and in Section D-4 of the draft RMAN III published in the Notice section of today's **Federal Register**.

c. *Impact of government procurement.* All levels of government install or contract for the installation of railroad grade crossing surfaces. Funds for the purchase of railroad grade crossings are available under the Surface Transportation Program of the Intermodal Surface Transportation Efficiency Act of 1991. At least 10 percent of these funds must be set aside for Rail-Highway Crossings and Hazard Elimination programs, which can include improvements to crossing surfaces. By considering the use of concrete, rubber, or steel surfaces containing recovered materials, procuring agencies will increase markets for these items and demonstrate their performance.

### 3. Preference Program

Based on comments submitted on the proposed CPG I, EPA is aware that procuring agencies will be concerned that the designation of a product such as railroad grade crossing surfaces, instead of a component of that product, would dictate design decisions based solely on recovered materials content and not upon engineering considerations of each individual project. Procuring agencies should keep in mind that neither RCRA section 6002, Executive Order 12873, nor the Federal Acquisition Regulation (FAR)<sup>2</sup> require recovered materials content to supersede engineering considerations. Both RCRA section 6002 and Executive Order 12873 require a procuring agency to purchase EPA-designated items containing recovered materials to the maximum extent practicable, unless the items "fail to meet the performance standards set forth in the applicable specifications or fail to meet the reasonable performance standards of the procuring agencies." RCRA section 6002(c)(1)(B).

Procuring agencies and their engineers and contractors are required, however, to affirmatively consider the

<sup>2</sup> Recent revisions to the FAR provide that procuring agencies must require engineers to specify the "use of the maximum practicable amount of recovered materials consistent with the performance requirements, availability, price reasonableness, and cost-effectiveness." 48 CFR §36.601-3(a).

use of items containing recovered materials for the specified application. In the case of railroad grade crossing surfaces, this might require reconsideration of the agency's guidelines or criteria used in selecting a crossing surface in order to permit the use of products containing recovered materials where appropriate.

## V. Park and Recreation Products

### A. Park Benches and Picnic Tables

The information obtained by EPA demonstrates that park benches and picnic tables made with recovered materials are commercially available. Today, in §247.14(c), EPA proposes to designate park benches and picnic tables containing recovered steel, aluminum, plastic, or concrete as items whose procurement will carry out the objectives of section 6002 of RCRA.

A final designation would not preclude a procuring agency from purchasing park benches and picnic tables made from other materials. It simply requires that a procuring agency, when purchasing steel, aluminum, plastic, or concrete park benches and picnic tables, purchase these items containing recovered materials when they meet applicable specifications and performance requirements.

When studying park and recreational furniture, EPA concentrated its research on park benches and picnic tables, but requests comments on any other items in this category that commenters believe are made with recovered materials and that may be purchased in appreciable quantities by procuring agencies.

#### 1. Background

Park benches and picnic tables can be found in parks, outdoor recreational facilities, and the grounds of office buildings and other facilities. Park benches are manufactured from a variety of materials, including concrete, brick, aluminum, steel, wood, or plastic—usually in the form of plastic lumber. Picnic tables are also manufactured from a variety of materials, primarily including wood, aluminum, concrete, or plastic. Some manufacturers also make these products from composite materials such as wood and plastic or wood and fiberglass. Although some manufacturers may make park benches and picnic tables entirely of steel, most steel included in these products is used in the framing.

#### 2. Rationale for Designation

EPA believes that park benches and picnic tables containing recovered materials meet the statutory criteria for selecting items for designation.



a. *Use of materials in solid waste.* Park benches and picnic tables can be made from a variety of recovered materials including aluminum, steel, wood, high density polyethylene (HDPE), low density polyethylene (LDPE), polyethylene, polyethylene terephthalate (PET), polypropylene (PP), and other plastic resins. Although EPA's research did not identify any manufacturers of concrete park benches and picnic tables made from recovered materials, the agency sees no technical or performance reasons why these items could not be made from concrete containing recovered materials. While the agency is aware that some manufacturers may use recovered wood in the manufacture of indoor furniture, EPA's research did not identify any manufacturers making park benches or picnic tables from recovered wood for outdoor use except when used as a composite with plastic. The agency is not aware of any manufacturers that make park benches or picnic tables from recovered wood except in the form of composite materials and requests comment on whether this is indeed the case in the industry. No manufacturers were identified that made these items from bricks containing recovered materials. Except for HDPE, markets for recovered plastics have been weak for the past year. Use of recovered plastic resins in park benches and picnic tables can expand markets for plastics, as well as other materials used in to make these products such as steel, aluminum, wood, and concrete.

b. *Technically proven uses.* EPA identified over 50 manufacturers and/or distributors of park benches and picnic tables containing recovered materials. A vast majority of the manufacturers/distributors identified by EPA use recovered plastic in their park benches and picnic tables. A number of technical and performance issues exist with respect to the different materials used to make park benches and picnic tables. In particular, wood and plastic outdoor and recreational furniture can differ significantly in terms of longevity and durability, the effects of temperature, maintenance requirements, strength, weight and other issues. Different kinds of plastic lumber (plastics vs. composites) also differ with respect to these performance issues. For example, plastic lumber timbers and posts may last longer and require less maintenance than wood timbers and posts, but wood timbers weigh 2 to 3 times less. Wood and plastic lumber also differ in tensile strength, creep, and reaction to temperature fluctuations. To address these issues, ASTM Subcommittee D-

20.20.01 developed several test methods for plastic lumber. These test methods are discussed in "Background Document for Proposed CPG III and Draft RMAN III" and are listed in Section E-3 of the draft RMAN III published in the Notice section of today's **Federal Register**.

c. *Impact of government procurement.* There are no data on the quantity of steel, aluminum, wood, or plastics used in outdoor and recreational furniture in general or in the park benches and picnic tables purchased by government agencies. GSA reported that in 1996, GSA-tracked purchases of park benches and picnic tables totaled nearly \$3.2 million. This figure includes items made from all types of materials. According to a GSA representative, federal spending may be as much as 20 higher than this figure since some large purchasers, such as the Department of Defense (DOD) and the U.S. Postal Service (USPS), often buy these items "off schedule." Park benches and picnic tables are purchased by all levels of government, but the quantities or dollar values are not known. The National Park Service has purchased park benches made of various materials, including plastic lumber for use in parks throughout the United States, as has DOD for use at military installations and naval bases. The States of Georgia, Wisconsin, and Washington also have purchased plastic lumber park benches and picnic tables containing recovered materials. Other potential federal purchasers include the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the Department of Housing and Urban Development (HUD).

#### B. Playground Equipment

The information obtained by EPA demonstrates that playground equipment made with recovered materials is commercially available. Today, in § 247.14(d), EPA proposes to designate playground equipment containing recovered plastic, steel, or aluminum as an item whose procurement will carry out the objectives of section 6002 of RCRA.

A final designation would not preclude a procuring agency from purchasing playground equipment made from other materials. It simply requires that a procuring agency, when purchasing steel, aluminum, or plastic playground equipment, purchase these items containing recovered materials when they meet applicable specifications and performance requirements.

#### 1. Background

Playground equipment is found in parks, schools, child care facilities, institutions, multiple family dwellings, restaurants, resort and recreational developments, and other public use areas. Major types of playground equipment include slides, swings, climbing equipment, merry-go-rounds, seesaws, and spring rocking equipment. Other playground components include stairways and ladders, rungs and other hand gripping components, handrails, protective barriers, and platforms. Playground equipment is usually designed to be age appropriate and is often divided into equipment for 2 to 5 year olds and 5 to 12 year olds.

Playground equipment can be made with a number of different materials. Many playgrounds have railings and structural support pieces made out of one material, fittings made out of another, and decks and platforms made of a third material. Galvanized steel is often used for railings and structural support, but these items can also be made with aluminum. Fittings, such as the bolts that hold chains to swings, are usually made from stainless steel or aluminum. Decks, platforms, and slides can be made from steel, aluminum, plastic, wood, and plastic lumber.

#### 2. Rationale for Designation

EPA believes that playground equipment containing recovered materials meets the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* Playground equipment can be made from a variety of recovered materials including aluminum, steel, wood, HDPE, LDPE, polyethylene, PET, PP, and other plastic resins. Recovered wood used in the manufacture of playground equipment is generally used to make a wood/plastic or a wood/fiberglass composite. The agency is not aware of any manufacturers that make playground equipment from recovered wood except in the form of composite materials and requests comment on whether this is indeed the case in the industry.

There are many different configurations for playground equipment using varying amounts of plastic lumber. One private purchaser of 100 percent HDPE plastic lumber playground equipment notes that the playground set they purchased, which includes three slides, used 86,000 milk jugs. A standard set of playground equipment sold by one manufacturer, including four slides, climbing equipment, and a number of platforms, uses 10,000 pounds of recycled plastic,



1,500 pounds of aluminum, and 2,000 pounds of recycled steel.

b. *Technically proven uses.* EPA identified 18 manufacturers and/or distributors of playground equipment containing recovered materials. A vast majority of the manufacturers/distributors identified use recovered plastic in their equipment.

Playground equipment is subject to Consumer Product Safety Commission (CPSC) guidelines and ASTM standard F-1487-95, "Safety Performance Specification for Playground Equipment for Public Use." Both of these standards note that playground equipment should be "manufactured and constructed only of materials which have a demonstrated record of durability in the playground or similar outdoor setting." The CPSC guidelines do not preclude the use of recovered materials. The ASTM standards note that "any new materials shall be documented or tested accordingly for durability by the playground equipment manufacturer."

Both CPSC and ASTM note issues with regard to the metal fittings and structural pieces used in playground equipment. The ASTM specification states that "metals subject to structural degradation such as rust and corrosion shall be painted, galvanized, or otherwise treated." Similarly CPSC notes that "ferrous metals should be painted, galvanized, or otherwise treated to prevent rust."

In addition to ASTM and CPSC standards, playground equipment must also meet state and local codes and standards as well as federal child safety laws.

A number of technical and performance issues exist with respect to the different materials used to make playground equipment. In particular, wood and plastic playground equipment can differ significantly in terms of longevity and durability, the effects of temperature, maintenance requirements, strength, weight and other issues. Different kinds of plastic lumber (plastics vs. composites) also differ with respect to these performance issues. For example, plastic lumber equipment may last longer and require less maintenance than wood playground equipment, but wood playground equipment can weigh 2 to 3 times less. Wood and plastic lumber also differ in tensile strength, creep, and reaction to temperature fluctuations. To address these issues, ASTM Subcommittee D-20.20.01 developed several test methods for plastic lumber. These test methods are discussed in "Background Document for Proposed CPG III and Draft RMAN III" and are listed in Section E-4 of the draft

RMAN III published in the Notice section of today's **Federal Register**.

c. *Impact of government procurement.* There are no data on the quantity of steel, aluminum, wood, or plastics used in playground equipment purchased by government agencies. GSA reported that in 1996, GSA-tracked purchases of playground equipment totaled \$4.1 million. This figure includes items made from all types of materials. According to a GSA representative, federal spending may be as much as 20 percent higher than this figure since some large purchasers, such as DOD and USPS, often buy these items "off schedule." Playground equipment is purchased by all levels of government, but aggregate quantities or dollar values are not known.

Purchase of playground equipment by HUD is done by individual housing projects. Purchasers of playground equipment include the U.S. Army and other branches of the Armed Services and the GSA child care facilities. Recent military purchasers include Langley Air Force Base and Fort Smith Naval Base, among other U.S. military purchases.

## VI. Landscaping Products

### A. Plastic Lumber Landscaping Timbers and Posts

The information obtained by EPA demonstrates that plastic lumber landscaping timbers and posts containing recovered materials are commercially available. Today, in § 247.15(e), EPA proposes to designate plastic lumber landscaping timbers and posts containing recovered materials as an item whose procurement will carry out the objectives of section 6002 of RCRA. A final designation would not preclude a procuring agency from purchasing landscaping timbers and posts manufactured from another material, such as wood.

#### 1. Background

Landscaping timbers and posts are used to enhance the appearance of and control erosion in parks, highways, housing developments, urban plazas, zoos, and the exteriors of office buildings, military facilities, schools, and other public use areas. Timbers and posts are used for such landscaping applications as raised beds, retaining walls, and terracing.

#### 2. Rationale for Designation

EPA believes that plastic lumber landscaping timbers and posts containing recovered materials meets the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* Plastic lumber can be made from a

variety of recovered materials. The product commonly is made from postconsumer HDPE. It also can be made from mixes of commingled plastics, such as HDPE, LDPE, polyethylene, PP, and linear low-density polyethylene; fiberglass-reinforced polyethylene; and composites of plastic and recovered wood chips and/or sawdust. At least one manufacturer uses composites of plastic and ground tire rubber. Plastic lumber timbers and posts have the potential to use large amounts of recovered materials. For example, it can take up to 45,000 milk jugs to produce 1,000 linear feet of a 4 x 6 timber.

b. *Technically proven uses.* There are 50 manufacturers and/or distributors of plastic lumber, although not all of them sell landscaping timbers and posts. At least 11 companies manufacture either specialized plastic lumber landscaping timbers and posts or plastic lumber that can be used for landscaping applications.

Wood and plastic lumber landscaping timbers and posts differ in terms of longevity and durability, the effects of temperature, maintenance, strength, weight, and other issues. Different kinds of plastic lumber (i.e., plastics vs. composites) also differ with respect to these performance issues. For example, plastic lumber timbers and posts may last longer and require less maintenance than wood timbers and posts, but wood timbers can weigh 2 to 3 times less. Wood and plastic lumber also differ in tensile strength, creep, and reaction to temperature fluctuations. To address these issues, ASTM Subcommittee D-20.20.01 developed several test methods for plastic lumber. These test methods are discussed in "Background Document for Proposed CPG III and Draft RMAN III" and are listed in Section F-5 of the draft RMAN III published in the Notice section of today's **Federal Register**.

c. *Impact of government procurement.* There are no data on the volumes of wood used in landscaping applications in general or in government landscaping projects. Landscaping materials are purchased by all levels of government, but the quantities or dollar values are not known. According to the National Park Service, there are currently 14 proposed landscaping projects that plan to use plastic lumber. Other potential federal purchasers include the Forest Service, HUD, and the armed services for use on military installations.

### B. Food Waste Compost

The information obtained by EPA demonstrates that food waste compost contains recovered materials (food

waste mixed with other organic materials) and is commercially available. EPA previously designated yard trimmings compost in CPG I in 40 CFR § 247.15(b). Today, EPA is proposing to revise the yard trimmings compost designation to include compost made from food waste or commingled food waste and yard trimmings as an item whose procurement will carry out the objectives of section 6002 of RCRA.

## 1. Background

Composting is the biological process of converting organic matter under controlled conditions into a product that is rich in humus and provides organic matter and nutrients to the soil. Mature compost (in which the composting process is completed) is composed of small brown particles, resembles soil, and is free of pathogens and weed seeds. Compost has been defined by the Compost Council, the trade association for the composting industry, in its "Composting Glossary," as follows:

Compost is the stabilized and sanitized product of composting; compost is largely decomposed material and is in the process of humification (curing). Compost has little resemblance in physical form to the original material from which it was made. Compost is a soil amendment, to improve soils. Compost is not a complete fertilizer unless amended, although composts contain fertilizer properties, e.g., nitrogen, phosphorus, and potassium, that must be included in calculations for fertilizer application.

Compost added to soil improves the ability of the soil to support plant growth. The organic matter in compost is particularly beneficial to poor soil infrastructure. Adding compost to clay soil, for example, reduces soil density and compaction, increases aeration, and increases soil porosity and drainage. These soil changes make plants less susceptible to root rot disease. Compost added to sandy soil increases the soil's ability to retain water and nutrients, as well as increasing its resistance to drought and erosion.

Compost can be used in a wide range of applications. It can be used as a substitute for peat moss, potting soil, topsoil, or other organic materials in agriculture, horticulture, silviculture (growing of trees), and in landscaping. In landscaping, compost is used as a soil conditioner, soil amendment, lawn top dressing, potting soil mixture, rooting medium, and mulch for shrubs and trees, and for restoration and maintenance of golf course turf and other sports turf. Tailor-made compost (i.e., compost designed and made for specific uses) also can be used for

bioremediation of contaminated soils, treatment of contaminated stormwater runoff, volatile organic compound (VOC) emission reduction, and reclamation of mining sites.

It is difficult to talk about "food waste compost" as a completely separate item, since most food waste composting programs add other available organic materials such as wood chips, sawdust, manure, or yard trimmings to their mixes. Different types of compost are better suited to different applications, making information about the composition of the compost feedstocks important to purchasers. Thus, there is no consensus among compost experts about how compost made with a significant amount of food waste should be classified. There is agreement, however, that all types of mature compost have great value due to humus and micro-organism content as a soil amendment and fertilizer.

## 2. Rationale for Designation

EPA believes that food waste compost containing recovered organic materials meets the statutory criteria for selecting items for designation.

### a. *Use of materials in solid waste.*

Food waste comprises nearly 7 percent (14 million tons per year) of municipal solid waste. Virtually all of this waste is potentially compostable. Institutions such as prisons, universities, and hospitals are excellent sources of food waste for large-scale or regional composting projects. Commercial establishments, such as grocery stores, restaurants, and cafeterias, also provide materials for use in commercial composting. In addition, a few curbside programs provide food waste to community-based composting programs. Fruit and vegetable trimmings are the most common feedstock composted, followed by kitchen preparation residuals, which can include overcooked pasta, stale rolls, and soups. As previously noted, most food waste compost programs mix other organic materials, such as sawdust, wood chips, yard trimmings, or manure, with food wastes to produce compost. These other added materials vary depending upon what is available to the composting program, and what nutrients or bulking agents are needed to make a high quality compost. Yard trimmings are the most popular amendment to food waste compost, followed by wood chips and sawdust.

b. *Technically proven uses.* The Composting Council is helping to define and develop industry-wide standards for composts made from various combinations of materials, including food wastes. The Composting Council

publishes these standards in an operating guide for composting facilities entitled, "Test Methods for Examination of Composting and Compost." The guide also provides standards for the suitability of different types of composts made for different applications, depending on the compost mix. In the U.S. Department of Transportation's (DOT) "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects 1996," the agency specifies mature compost for use in road construction and does not specifically preclude the use of food waste in its required composition of compost. Many State Departments of Transportation have adopted these standards for highway construction projects.

The nutrient and organic carbon content of compost serves as a food source for microorganisms in soil, thus increasing the availability of the soil's organic and nutrient content to plants and aiding faster recycling of nutrients within the system. In addition to returning organic materials and nutrients to the soil, other advantages of amending soil with compost include:

- Moderates soil temperature, so that plant roots are warmed in winter and, through water retention, cooled in dry, hot conditions.
- Suppresses some plant diseases, such as wilt and root rot, reducing the need for chemical pesticides and fungicides. Compost has been shown to be important in controlling wilt disease in certain flowers commonly grown for indoor use. Specifically, compost prevents fusarium wilt disease on cyclamens, a disease that is not otherwise treatable.
- Replaces part or, in some cases, all of the fumigants and fungicides used on food crops or landscape projects, according to research conducted at Ohio State University and verified by researchers in Florida, Pennsylvania, and Alabama.
- Releases nutrients in organic form, such as nitrogen, into the soil slowly over time. This property of compost allows for a significant reduction in fertilizer use and is compatible with the rate of plant root uptake.
- Reduces nonpoint source runoff by preventing siltation and by degrading pollutants in the run-off.
- Restores contaminated, eroded, or compacted soil.

Compost's organic composition increases the soil's water-holding capacity. Compost also increases water infiltration into the soil. Compost helps to reduce soil compaction and increase soil friability, thus decreasing the erodability of soil. Finally, compost can

prevent the crusting of soil surfaces, which can otherwise inhibit seedling growth.

c. *Impact of government procurement.* Military installations alone contain about 20 million acres of land that needs to be maintained. The potential compost usage (at 40 cubic yards per acre) for even a portion of this acreage would be significant. A Marine Corps base in Camp Lejeune, North Carolina, for example, has been composting food waste for more than two years. The operation mixes food waste from mess halls on the base with shredded paper, cardboard and yard and wood waste. The facility accepts an average of 10 tons of food waste per week, generating more than 2,400 tons of yard trimmings and food waste compost per year for use on the base's more than 150,000 acres. Compost is used on landscaping projects and made available to contractors for use in construction projects.

As part of a one-year demonstration project, the DOD District Depot in New Cumberland, Pennsylvania partnered with a nearby state correctional facility to compost its food waste. The depot mixed the food waste with scrap wood from its pallet reclamation operation in two aerated static piles. The finished product was used onsite for landscaping projects and made available to project partners, including the local townships. Other correctional institutions have had tremendous success with composting. Of the 70 correctional facilities in New York State, 48 compost food waste. In fiscal year 1996, these institutions diverted approximately 8,300 tons of food waste for a savings of more than \$1 million, including avoided disposal costs, hauling fees, and equipment maintenance and storage costs.

Whiteman Air Force Base in Missouri generated 42 tons of food waste compost through a pilot program in the fall of 1995. Using an in-vessel system, the base mixed yard trimmings with the food waste generated at a recycling conference in Kansas City. They have used the compost on the base and given at least 40 cubic yards to the local solid waste district for a local land improvement program. By the fall of 1998, the base plans to establish a permanent in-vessel food waste composting operation.

Other federal markets for compost made with food waste could be substantial. As of 1997, the U.S. Forest Service and Park Service maintain 500,000 miles of roadsides and embankments and millions of acres of land. The U.S. Forest Service manages more than 190 million acres of land at 156 national forests, while the U.S. Park

Service manages more than 83 million acres and 369 national parks. At John Muir National Historic Site, for example, fruit residuals from the 8 acres of orchards and vineyards are composted with wood chips, yard trimmings and paper waste. The site composts approximately 6 tons per year in three 20 cubic yard containers. In addition, universities, hospitals, and prisons may be using appropriated federal funds for their composting operations and purchases.

To assist in the development of federal markets for compost, President Clinton issued a memorandum entitled, "Environmentally and Economically Beneficial Practices on Federal Landscaped Ground" on April 26, 1994. Agencies are encouraged to develop practical and cost-effective landscaping methods that preserve and enhance the local environment. This memorandum requires the use of mulches and compost by federal agencies and in federally funded projects.

## VII. Non-Paper Office Products

### A. Plastic Binders, Clipboards, File Folders, Clip Portfolios, and Presentation Folders

The information obtained by EPA demonstrates that solid plastic binders, clipboards, file folders, clip portfolios, and presentation folders are available containing recovered plastics. EPA previously designated binders in CPG I. Today, in § 247.16(d), EPA proposes to amend the existing designation of binders to include solid plastic binders containing recovered plastic. In § 247.16(h)–(k), EPA proposes to designate plastic clipboards, plastic file folders, plastic clip portfolios, and plastic presentation folders containing recovered plastic, respectively, as items whose procurement will carry out the objectives of section 6002 of RCRA. A final designation would not preclude a procuring agency from purchasing these items manufactured from another material. It simply requires that a procuring agency, when purchasing plastic binders, clipboards, file folders, clip portfolios, and presentation folders, purchase these items made with recovered plastic when these items meet applicable specifications and performance requirements.

EPA previously designated "binders" in CPG I in 40 CFR § 247.16(d). In the background document for the final CPG I, EPA explained that the "binder" designation includes plastic-covered binders containing recovered plastic, chipboard and pressboard binders, and the paper component of covered binders. In order to clearly define the

scope of the binder designation, EPA is revising § 247.16(d) to list the types of binders within the scope of the designation.

#### 1. Background

Binders, clipboards, file folders, clip portfolios, and presentation folders are commonly used office products made from a variety of materials, such as paper, plastic, paperboard, and wood fiber.

#### 2. Rationale for Designation

EPA believes that solid plastic binders, plastic clipboards, plastic file folders, plastic clip portfolios, and plastic presentation folders meet the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* Solid plastic binders, clipboards, file folders, clip portfolios, and presentation folders can be made from HDPE, polyethylene, PET, polystyrene, and various other types of recovered plastics. Except for HDPE, markets for recovered plastics have been weak for the past year, and additional markets for HDPE are needed, as well.

b. *Technically proven uses.* Each of the items is available commercially from several sources. EPA is aware of five distributors of binders, file folders, clipboards, clip portfolios, and presentation folders containing recovered HDPE. HDPE binders, clipboards, and presentation folders currently are available through GSA's New Item Introductory Schedule. EPA also is aware of five manufacturers and distributors of solid plastic binders, clipboards, and file folders containing other types of plastics.

c. *Impact of government procurement.* All government agencies purchase binders, clipboards, file folders, clip portfolios, and presentation folders. EPA was not able to quantify purchases of these items, but EPA believes that they are purchased in substantial quantities that support the proposed designations of these items.

## VIII. Miscellaneous Products

### A. Sorbents

The information obtained by EPA demonstrates that sorbents (i.e., absorbents and adsorbents) containing recovered materials are commercially available. Today, in § 247.17(b), EPA proposes to designate sorbents containing recovered materials for use in oil and solvent clean-ups and as animal bedding, as items whose procurement will carry out the objectives of section 6002 of RCRA. Based on EPA's research, sorbents can

be made containing recovered paper, rubber, yard trimmings, wood, gypsum, plastics, and textiles. A final designation would not preclude a procuring agency from purchasing sorbents manufactured from other materials, such as clay, perlite, or sand. The agency requests comments on whether sorbents used for oil/solvent clean-ups and/or animal beddings are made containing any other types of recovered materials.

## 1. Background

Absorbents and adsorbents are used in a diverse number of environmental, industrial, agricultural, medical, and scientific applications to retain liquids and gases. While absorbents and adsorbents are often used in the same applications, they perform fundamentally different functions. *Absorption* is "the incorporation of a substance throughout the body of the absorbing material," whereas *adsorption* is the "gathering of substances over the surface of the adsorbing material." Since absorbent and adsorbent products are often used interchangeably in many applications, EPA has chosen to use the term "sorbent(s)" to describe all items in this category.

Sorbents are most often used to clean up industrial and environmental oil and solvent spills. They are also used in wastewater treatment, odor control, food processing, septic system maintenance, resource recovery, dust and erosion control, photography, hazardous waste remediation, precious metal recovery, chemical processing, and leachate control of phosphates and nitrates from fertilizers. In addition, sorbents are used in packaging materials, animal bedding, cat litter, protective clothing, gas masks, and personal hygiene products. After reviewing the government procurement of sorbent products, EPA believes that oil and solvent spill cleanup and animal bedding are the most common government applications for sorbents and, therefore, proposes to limit the item designation to these applications. These products are commercially available and are made with various types of recovered materials.

Sorbent used for oil/solvent clean-up spills are manufactured from a variety of organic, inorganic, and synthetic materials, or a combination thereof. In general, these sorbents can be classified into three categories as follows:

- *Organic sorbents* can be manufactured from virgin materials, but most commercially available sorbents are made from materials recovered from municipal and industrial solid waste streams.
- *Inorganic sorbents* are generally mined virgin materials, such as perlite or

vermiculite. Most inorganic materials can also be recovered and used again through a laundering process.

- *Synthetic sorbents* are made from either virgin synthetic materials or synthetics recovered from the municipal and industrial solid waste streams.

## 2. Rationale for Designation

EPA believes that sorbents used for oil/solvent clean-ups and animal bedding containing recovered materials meets the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* Sorbents used in spill applications are manufactured from a variety of recovered materials, including 100 percent postconsumer newspapers, tires, yard trimmings, and construction and demolition (C&D) debris, such as wood waste and gypsum. These sorbents can also be made with 100 percent recovered material from the plastics, textile, lumber, and pulp and paper industries. Animal bedding is generally made from recovered wood or other cellulosic fiber sources, such as paper. One sorbent manufacturer estimated that the company uses 2,400 pounds of old newspaper each year to make its sorbent products. Another company from which EPA obtained information estimates that it uses between 600 and 1,000 tons of lumber mill waste each year to manufacture sorbent products. Two other companies estimate that they each use 8,000 tons per year of paper fines from paper mill sludge in their sorbent products. Other companies for which EPA has information report using both wood and gypsum from construction and demolition wastes in their products.

b. *Technically proven uses.* EPA identified 43 companies that manufacture and/or distribute sorbents containing recovered materials for oil/solvent clean-ups and for use as animal bedding. The type of sorbents used for spill applications generally depends on the type of substance being sorbed, where the spill occurs, and worker health and safety issues.

The type of material(s) used to manufacture sorbents is very important to consider when choosing a sorbent product. Sorbents made from materials that are incompatible with the substance being sorbed can potentially disintegrate, create a fire hazard, or pose problems for worker safety. Organic sorbents, for example, are incompatible with, and should not be used to clean up substances such as inorganic acids, caustics, or hydrazines and hydrazides. Sorbents made from organic materials can, however, be used to clean up most oils and fuels (e.g., mineral oil, gasoline,

and hydraulic fluid), coolants (e.g., antifreeze), transformer oils (including Polychlorinated Biphenyls), paints (e.g., latex based, lacquers, and thinner), alcohols, solvents, toxins (e.g., cyanides and battery acid), and insecticides and herbicides.

According to one manufacturer, using products made with recovered materials can pose some potential concerns. Postconsumer wastes can contain residuals that are incompatible with aggressive materials (e.g., highly flammable jet fuels). This manufacturer also indicated that products used to absorb some types of jet fuel need to have specific nonstatic characteristics.

Where the spill occurs will also affect the type of sorbent that is used. To clean up spills on water, for example, the sorbent used should be hydrophobic, or water resistant, so it will float on water. Sorbents that are not hydrophobic (i.e., hydrophilic) are generally not used for spills on water, as they will sink, causing problems when removing the product from the water body. Thus, for spills on water, polypropylene and a small number of organic sorbent products that are treated to make them hydrophobic—are the most commonly used and are available with recovered materials. Particulate and loose sorbents are also not recommended for use on open water because they too may absorb water and sink or be lost to recovery because of winds, waves, and currents.

End-users also must consider how a sorbent product may effect the environment, particularly when cleaning up spills in environmentally sensitive areas (e.g., salt marshes and wildlife refuges). Sorbents should not be used which could cause entanglement or digestive problems if ingested by wildlife or marine animals. Products with recovered materials are being made that satisfy these environmental concerns, however.

Worker health and safety issues also can play a role in the selection of sorbent products. Sorbent mats, pads, and rolls may be best suited for the routine spills that occur during machine maintenance operations. These products are easier to handle because they lie flat and keep walking surfaces safe for workers. Particulate sorbent materials, on the other hand, may be difficult to clean up and may cause workers to slip. Again, sorbents containing recovered materials are being made that satisfy concerns.

Under certain conditions, some sorbent materials can be reused or recycled. Some manufacturers of synthetic sorbents, for example, market products that can be reused up to 100 times. Under pressure, synthetic

sorbents will release the sorbed substance, allowing it to be recovered and the sorbent to be reused. Manufacturers of organic sorbents, on the other hand, claim their sorbents can be incinerated for energy recovery and that this process leaves very little ash residue. In addition, clay sorbents can be put through a "laundering" process through which the sorbed substance and clay can both be reclaimed for reuse.

EPA is aware of two government specifications for sorbent products; however, at present both preclude the use of organic sorbents in applications where the type of sorbent material is not otherwise an issue. The GSA specification, "Absorbent Material, Oil and Water (For Floors and Decks)," for example, states that "the absorbent material shall consist of a uniform mixture of minerals of the silicate type." This specification is used when ordering from the GSA stock item program. Government agencies can procure sorbent products through the GSA's stock contracts and the Multiple Award Federal Supply Schedule. GSA stock contractors must meet GSA's Commercial Item Description specification, "Absorbent Materials, Oil and Water (For Floors and Decks)." Thus, when purchasing sorbent products from GSA warehouses, government agencies are limited to purchasing sorbents made from silicate minerals. When ordering sorbent products directly from a multiple award contractor, however, there are no procurement specifications. Instead, government agencies rely on the manufacturers specifications, and a full range of sorbent products (e.g., organic, inorganic, and synthetic) are available for purchase.

The National Institutes of Health specification, "Laboratory Animal Bedding, Softwood," precludes the use of recovered materials. The specification states that sorbents used for "contact bedding for animals . . . shall be from unused white pine (or related species of low resin soft pine) lumber."

ASTM has test methods for both absorbents and adsorbents used to remove oils and other compatible fluids from water. These are "Standard Methods of Testing Sorbent Performance of Absorbents (F716-82)" and "Standard Method of Testing Sorbent Performance of Adsorbents (F716-81)." Neither of them mention any exceptions or differences for testing of sorbents made from recovered materials, however.

EPA's research on sorbents did not identify any technical basis for the exclusion of recovered materials in these items. The Agency, therefore,

requests comments on whether there are technical and/or performance-related reasons why specifications for sorbents should preclude the use of recovered materials.

*c. Impact of government procurement.* EPA does not have aggregate figures for the amount or cost spent each year by government agencies for sorbent materials, but believes the amount to be significant. As previously mentioned, government agencies can procure sorbent products through the GSA's stock contracts and the Multiple Award Federal Supply Schedule.

A number of federal and state agencies purchase a variety of sorbent products. The U.S. Coast Guard's Marine Safety and Environmental Protection Division typically uses polypropylene sorbents to clean up spills on water, and paper or cellulosic sorbents to clean up spills on land (i.e., spills that occur during maintenance of vehicles and boats). The National Park Service purchases a variety of sorbent products used to clean up routine and emergency spills on water, and for spills that occur during fleet (i.e., vehicles and boats) maintenance. Although they do not track the purchase of absorbent products, a contact for the National Park Service claims they spend well over \$10,000 on sorbent products each year. The U.S. Army Corps of Engineers at Dworshak Dam in Idaho is using a sorbent made from 100 percent recovered wood waste from the lumber industry for emergency spill response activities. The U.S. Department of Energy and Lockheed-Martin have a contract with a manufacturer for sorbent materials which are made from recovered paper pulp waste. According to information from Lockheed-Martin, they recently purchased more than \$100,000 of these products.

EPA believes that many government agencies purchase sorbent materials, including all branches of the military and agencies that maintain motor pools.

#### *B. Industrial Drums*

The information obtained by EPA demonstrates that industrial drums are available containing postconsumer and other recovered materials, including steel, HDPE, and old corrugated containers. Today, in § 247.17(c), EPA proposes to designate industrial drums containing recovered steel, plastic, or paper as items whose procurement will carry out the objectives of section 6002 of RCRA. A final designation would not preclude a procuring agency from purchasing industrial drums manufactured from another material. It simply requires that a procuring agency, when purchasing steel, plastic, or

pressed fiberboard industrial drums, purchase these items made with recovered materials when these items meet applicable specifications and performance requirements. Applicable requirements include the U.S. Department of Transportation (DOT) hazardous material packaging requirements.

#### *1. Background*

Industrial drums are cylindrical containers used for shipping and storing hazardous and nonhazardous liquid or solid materials. Industrial drums are manufactured from a variety of materials, including steel, plastic, and pressed fiberboard. The different materials used in the manufacture of industrial drums provide slightly different performance or cost benefits.

#### *2. Rationale for Designation*

EPA believes that industrial drums containing recovered materials meet the statutory criteria for selecting items for designation.

*a. Use of materials in solid waste.* Steel, plastic, and fiber drums are or can be manufactured with recovered materials. All steel drums contain at least 25 percent recovered materials. Plastic drums can be manufactured with HDPE from postconsumer plastic drums. Fiber drums are manufactured from old corrugated containers and other sources of paperboard.

Industrial drums also can be reused within a controlled distribution chain or reconditioned and reused. Partners in EPA's WasteWiSe program have found that drum reconditioning can reduce waste disposal. For example, in 1995, Dow Corning reconditioned 150,000 steel drums, eliminating 7.8 million pounds of steel. Dow Corning also eliminated 1,100 pounds of HDPE by cleaning and selling plastic drums.

*b. Technically proven uses.* There are 26 manufacturers of steel drums, all of whom use recovered steel. EPA identified two plastic drum manufacturers that use recovered materials. One manufacturer uses up to 100 percent postconsumer HDPE, while the other manufacturer produces a multi-layer drum that includes a 100 percent postconsumer recovered HDPE layer sandwiched between two virgin plastic layers. EPA also identified one manufacturer of fiber drums that uses recovered materials. Additionally, there are over 100 drum reconditioners in the United States.

The U.S. DOT specifies drum performance criteria for each of its hazardous material packing group classifications. DOT currently requires virgin plastic for drums that will be

used to transport or store hazardous materials because plastic absorbs small quantities of some materials, which could react with materials subsequently stored in the drums. However, the latest United Nations "Recommendations on the Transport of Dangerous Goods" allows the use of recovered plastics in hazardous materials packaging. It is likely that DOT will adopt the UN recommendations but has not yet done so. In the interim, DOT provides exemptions allowing the use of recovered content in plastic drums.

Other national specifications (e.g., the performance specifications issued by the National Motor Freight Traffic Association) do not preclude the use of recovered materials in industrial drums.

*c. Impact of government procurement.* Government agencies and their contractors purchase industrial drums for the transport of hazardous and nonhazardous materials. Thus, government procurement of industrial drums containing recovered materials will create or expand markets for this item. Additionally, EPA is aware that some DOD installations reuse or refurbish steel drums, and the Defense Reutilization and Marketing Office (DRMO) frequently provides triple-rinsed steel drums previously used to transport nonhazardous materials.

### C. Awards and Plaques

The information obtained by EPA demonstrates that plaques and awards made with recovered materials are commercially available. Today, in § 247.14(d), EPA proposes to designate awards and plaques containing recovered glass, wood, paper, or plastic as items whose procurement will carry out the objectives of section 6002 of RCRA.

A final designation would not preclude a procuring agency from purchasing awards and plaques made from other materials. It simply requires that a procuring agency, when purchasing glass, wood, paper, or plastic awards and plaques, purchase these items containing recovered materials when they meet applicable specifications and performance requirements.

#### 1. Background

Awards and plaques are articles of recognition for outstanding performance or service and are generally given for job-related duties. For the purposes of this designation, awards refer to free-standing statues while plaques refer to "board-like" products generally used as wall-hangings.

Awards and plaques are manufactured from a variety of

materials including glass, wood, paper, and plastic. Some products are also made of a composite consisting of plastic and wood (e.g., sawdust). The agency requests comments on whether these items are made with other types of recovered materials.

#### 2. Rationale for Designation

EPA believes that awards and plaques containing recovered materials meet the statutory criteria for selecting items for designation.

##### *a. Use of materials in solid waste.*

Awards and plaques can be made from a variety of recovered materials including glass, wood, paper, and plastic (LDPE, HDPE, and other plastic resins). According to one manufacturer, a standard 8" x 10" plaque diverts approximately one pound of materials from the waste stream.

*b. Technically proven uses.* Awards and plaques are sold by manufacturers and distributors of promotional products. According to a 1995 survey, there are approximately 13,000 such distributors and manufacturers in the United States. EPA identified six companies that manufacture or distribute awards and plaques made from recovered materials. According to four of the companies contacted, recovered content awards are generally made from blown glass, while plaques are made from various materials, including compressed newsprint and sawdust.

The promotional products industry has grown from \$5 billion a year in 1990 to more than \$8 billion in 1995. A survey conducted by the Promotional Products Association (PPA) estimates that awards and plaques account for almost 8 percent, or approximately \$62 million, of promotional product sales. No discrete data are available on the percentage of awards and plaques manufactured with recovered materials. Distributors of awards made from recovered glass indicate these products are manufactured only on an as-needed basis. Three manufacturers of plaques made from recovered materials, on the other hand, state their products are produced on a regular basis, but not in large volumes.

##### *c. Impact of government procurement.*

Government agencies purchase awards and plaques through the GSA Federal Supply Service's Multiple Awards Contract (MAC) for "Trophies, Awards, Plaques, Plaques with Clocks, Pins, Ribbons, Medals, Pen Sets, and Plates/Bowls Suitable for Engraving." GSA does not track the number of awards or plaques purchased under this contract, but informed EPA that government agencies purchased approximately \$10

million worth of products under the subcategory "awards, plaques, trophies, plaques with clocks, pins, ribbon, and medals" between 1990 and 1993. Between 1993 and 1996, \$12 million worth of products were purchased. Although EPA was unable to obtain specific information on purchasing volume, information obtained from GSA indicates that awards and plaques are the most popular items within the product category.

#### D. Mats

The information obtained by EPA demonstrates that mats made with recovered materials are commercially available. Today, in § 247.17(e), EPA proposes to designate mats containing recovered rubber and/or plastics as items whose procurement will carry out the objectives of section 6002 of RCRA.

A final designation would not preclude a procuring agency from purchasing mats made from other materials. It simply requires that a procuring agency, when purchasing rubber and/or plastic mats, purchase these items containing recovered materials when they meet applicable specifications and performance requirements.

#### 1. Background

Mats are temporary or semi-permanent protective floor coverings used for numerous applications. They are used to protect carpeting by reducing wear and tear in heavy traffic areas and by removing moisture, dirt, and grime from people's shoes. They are used to protect car and truck floor boards from dirt or accidental spills, and office carpeting from wheel damage caused by swivel chairs. Mats are used to provide traction on stairs, ship decks, docks, around pools, or on marble or tile floors; to reduce worker fatigue in occupational work areas that require excessive standing; and to reduce the risk of injury during athletic events. Mats are also used for many specialty applications, such as protecting truck beds and the teeing areas of golf driving ranges.

Mats are manufactured in a wide variety of designs and from numerous materials. Some of the most common materials used include HDPE, LDPE, nylon, PET, polycarbonate, PP, PVC, rubber, cocoa fiber, tempered hardboard, and wood. Multiple materials may be used in a single mat. Vinyl or rubber "links," for example, can be joined together with steel or aluminum rods. EPA's research found that mats made with recovered materials are limited to rubber and/or plastic mats which can also include aluminum or

steel linkages or frames made from recovered metals.

## 2. Rationale for Designation

EPA believes that mats containing recovered materials meet the statutory criteria for selecting items for designation.

### a. *Use of materials in solid waste.*

Mats are made with recovered and postconsumer rubber and or plastic, including PVC, HDPE, LDPE, PET, and PP. In addition, some mats contain steel or aluminum links or frames, which contain recovered metals. Some mats are manufactured from a mixture of rubber and plastics. According to manufacturers from which EPA obtained information, most mats contain at least some postconsumer materials.

### b. *Technically proven uses.*

Manufacturers estimate that between 75 and 95 percent of all mats manufactured in the United States are made with some percentage of postconsumer material content. According to all of the manufacturers contacted by EPA, recovered content mats perform as effectively as their virgin counterparts, although virgin materials are sometimes added to provide color or product consistency. EPA identified 44 manufacturers, distributors, or suppliers of recovered content mats. They are located throughout the United States and supply both domestic and international markets. At least 25 manufacturers of the 44 manufacturers identified produce rubber mats from at least 90 percent postconsumer tires. Several manufacturers also produce mats that contain 100 percent postconsumer PVC, 100 percent postconsumer mixtures of HDPE and PP, 100 percent postconsumer mixtures of rubber and PVC, and up to 97 percent postconsumer HDPE, LDPE, PET, and PP.

With the exception of competition wrestling mats, EPA did not identify any industry, government, or independent specifications for mats. ASTM developed a wrestling mat specification for mats used in high schools and colleges. The specification addresses the construction of closed-cell foam cores with PVC, PVC coatings, or both; foam cores, either open- or closed-cell enclosed in sewn, loose covers; and molded open-cell PVC foam with a dense skin on one surface that is an integral part of the mat. The ASTM specification does not preclude the use of recovered materials.

### c. *Impact of government procurement.*

EPA was unable to obtain any information regarding the quantity of mats procured by government agencies. An individual from USPS explained

that, although each of the 40,000 USPS facilities probably uses antifatigue mats, USPS, like many procuring agencies, does not have a centralized procurement system.

The GSA Supply Catalog lists 36 products in 9 mat categories, including chair, door, deck, dental floor, porch floor, anti-fatigue, insulating, ribbed floor, and stair tread mats. The GSA catalog identifies 2 of the 36 products as containing recovered materials, both of which are door mats containing 100 percent postconsumer recovered rubber. The number of categories and products on the GSA schedule suggests that there is a sizable government market for mats. Most federal buildings, for example, contain numerous entrance, floor, and chair mats. The U.S. DOD procures a variety of mats, including antislip mats for boat and ship decks and docks, helicopter landing mats, and truck bed mats.

## E. Signage

The information obtained by EPA demonstrates that signs and sign supports/posts made with recovered materials are commercially available. Today, in § 247.17(f), EPA proposes to designate non-road signs containing recovered plastic or aluminum and road signs containing recovered aluminum as items whose procurement will carry out the objectives of section 6002 of RCRA. In addition, this proposed designation includes sign supports and posts made from recovered plastic or steel.

A final designation would not preclude a procuring agency from purchasing signage or supports/posts made from other materials. It simply requires that a procuring agency, when purchasing plastic or aluminum signs for specific applications, purchase these items containing recovered materials when they meet applicable specifications and performance requirements. This designation pertains to plastic signs (and any associated plastic or steel supports/posts) used for non-road applications (e.g., buildings, parking lots, trails, etc.) and aluminum road signs (and any associated steel supports/posts).

## 1. Background

Signs made from recovered materials are used for public roads and highways, and inside and outside office buildings, museums, parks, and other public places. The Federal government procures four types of signs: (1) conventional road signs, (2) expressway signs, (3) freeway signs, and (4) miscellaneous non-road signs. Highway and other road signs are purchased by state and local governments primarily

with federal government transportation funds. Non-road signs are procured at the federal and state levels on an as needed basis. Both road and non-road signs may require the use of supports/posts depending on the location of the sign.

## 2. Rationale for Designation

EPA believes that signage containing recovered materials meets the statutory criteria for selecting items for designation.

### a. *Use of materials in solid waste.*

Sign blanks, posts, and supports containing recovered materials are primarily manufactured using recovered aluminum and postconsumer or recovered plastics, including HDPE, LDPE, PET, PP, polycarbonate. Although the research conducted by EPA did not identify any manufacturers of signs, supports, or posts containing postconsumer or recovered wood, some manufacturers may use recovered wood to make signs and supports/posts. The Agency requests comments on the prevalence and use of postconsumer or recovered wood in the manufacture of signs and supports/posts. EPA obtained information on the use of steel for sign supports/posts; however, the agency did not identify any manufacturers of signs made from steel. The agency requests comments on the prevalence or use of recovered steel in the manufacture of signs.

b. *Technically proven uses.* EPA identified nine manufacturers and distributors of signs and supports/posts containing recovered materials, seven of which use various postconsumer and/or recovered plastics and two of which use recovered aluminum.

## (1) Road Signs

While almost any rigid material can be used for any type of road sign, most state agencies use aluminum because it has a high strength-to-weight ratio, costs less than other materials, and withstands extreme temperatures. Aluminum's strength-to-weight ratio is an important consideration. Road signs are usually more than 3 feet wide, so they must be strong but lightweight. States occasionally use smaller road signs, which could be made of a weaker material, but they prefer to use the same material for all signs to achieve economies of scale. States also prefer aluminum because it resists environmental damage. EPA obtained information that suggested that plywood is also occasionally used for road signs, but that its use has declined over the years. Road signs are normally constructed of several extruded aluminum planks, formed into flat-



bottomed U-shapes and placed side by side. Tape is used to smooth the joints, and braces are extended across the back to stabilize the sign. A reflective polymer is applied to the front to create lettering and symbols. Sign blanks are typically comprised of either aluminum sheeting or an exterior grade plywood.

Several grades of aluminum are used in road signs. Although most aluminum products contain recovered materials, products made from lower grade aluminum usually contain higher percentages of recovered materials. A contact at the Connecticut Department of Transportation said that most states use a mid-level grade of aluminum (Grade 5051) for road signs. The Ohio Department of Transportation uses a higher grade (Grade 6061), but has recently approved the use of two lower grades (Grade 5051 and 3038) as well. According to the National Aluminum Association, common alloy sheet aluminum, from which sign blanks are made, consistently contains fairly high levels of recovered content regardless of grade, although the association could not provide an average percentage. Standard specifications for road sign size, lettering, color, strength, and other design and performance requirements can be found in the "Manual on Uniform Traffic Control Devices" published by the Federal Highway Administration.

#### (2) Non-Road Signs

These signs are used in areas other than roadways, such as office buildings, national parks, historic sites, monuments, and other places of public interest. Non-road signs are often smaller than standard roadway signs. As a result, they can be made of materials with lower strength-to-weight ratios, such as wood and plastics like HDPE and PP, although they are also often made with aluminum. There are two types of plastic signs: a simple, paintable sheet and a triple-ply, two-color sheet that is meant to be routed (or etched) to expose the interior color. The use of plastic is better suited to smaller signs, as large plastic signs can be extremely heavy.

#### (3) Sign Supports and Posts

Sign posts and supports can be made from a variety of materials, including steel, fiberglass reinforced plastic, thin-wall steel tubing, steel U-post or flanged channel, and standard schedule 40 steel pipe. Other materials being used in small sign supports include wood and other types of plastic. The number and type of supports selected for use at a given site depends on sign blank area and buyer preference. A period of 15 to

20 years is the maximum life expectancy for most sign posts and supports, regardless of the type of material.

#### c. Impact of government procurement.

##### (1) Road Signs

Most states purchase aluminum sign blanks made from common alloy sheet aluminum, which usually contains recovered materials. The number of states purchasing recovered plastic road signs is currently small, but that number is expected to grow as plastic sign technology matures.

##### (2) Non-road Signs

EPA identified a total of 24 federal and state agencies that have purchased non-road signs containing recovered materials. Federal agencies currently purchasing non-road plastic signs containing recovered materials include the National Park Service; the U.S. Forest Service; the U.S. Coast Guard; and the U.S. Navy. State agencies identified include the Michigan Department of Transportation and the Ohio Department of Natural Resources.

The National Park Service informed EPA that plastic containing recovered materials is a viable alternative for non-road signs in all national parks and national forests. Overall, they were pleased with the performance of the signs in their parks. Some of the signs have been in place for up to 8 years. A vendor that sells primarily recovered-content HDPE signs indicated an increase in demand for these signs over the past three years.

#### F. Strapping and Stretch Wrap

The information obtained by EPA demonstrates that manual-grade strapping is available containing postconsumer and other recovered materials, including steel, PP, and PET. Today, in § 247.17(g), EPA proposes to designate manual-grade strapping containing recovered steel or plastic as an item whose procurement will carry out the objectives of section 6002 of RCRA. A final designation would not preclude a procuring agency from purchasing strapping manufactured from another material, such as rayon or nylon. It simply requires that a procuring agency, when purchasing steel, PP, or polyester strapping, purchase these items made with recovered materials when they meet applicable specifications and performance requirements.

Machine-grade strapping also can contain postconsumer and other recovered materials. EPA determined that Federal agencies, including the Defense Logistics Agency (DLA), DOD,

GSA, and USPS, purchase manual-grade strapping products for use in palletizing operations. However, EPA was unable to verify that they use machine-grade strapping. Because Federal agencies might not procure this item, EPA is not proposing today to designate machine-grade strapping. EPA requests information about Federal agency use of machine-grade strapping.

Plastic stretch wrap can be made from recovered LDPE and/or PET. In the background document for the proposed CPG II, EPA stated that it was aware of five companies that can make pallet stretch wrap from recovered plastic, but only one that produces the product as a stock item. EPA requested information on additional manufacturers using recovered materials in their stock stretch wrap. No comments were submitted. Because only one manufacturer has been identified, EPA currently is not considering stretch wrap containing recovered materials for designation in the CPG. EPA is again requesting information on the use of recovered materials by other stretch wrap manufacturers.

#### 1. Background

Strapping refers to straps of material used with transport packaging to hold products in place on pallets or in other methods of commercial, bulk shipment. Strapping can also prevent tampering and pilferage during shipping. Stretch wrap, which is a thin, semi-adhesive plastic film, is sometimes used in conjunction with strapping to hold products or materials on a pallet.

#### 2. Rationale for Designation

EPA believes that manual-grade strapping containing recovered materials meets the statutory criteria for selecting items for designation.

a. *Use of materials in solid waste.* There are five basic types of strapping—steel, PP, polyester, nylon, and polyester cord. Of these, steel, PP, and polyester strapping are or can be made with recovered materials. The volume of recovered materials used varies greatly depending on the type of strapping, the materials being used, the company's ability to incorporate recycled materials, and current market prices for virgin and recovered materials. For example, additional equipment is needed to use recovered PET, and manufacturing from recovered PET is only economically feasible if the price of recovered PET is comparable to virgin materials.

Steel strapping contains 25 to 100 percent recovered material, including 10 to 14 percent postconsumer material. Polypropylene strapping can contain up to 100 percent recovered materials,

including up to 50 percent postconsumer material. Polyester strapping can contain up to 100 percent PET, including up to 75 percent postconsumer material from soda bottles. In particular, polyester strapping can be made with green soda bottles and, thereby, provides a market for a recovered material that otherwise has limited markets.

b. *Technically proven uses.* At least eight manufacturers use recovered materials to manufacture PP and polyester manual-grade strapping. Of these, three manufacturers produce steel strapping containing recovered materials. These companies are identified in "Background Document for Proposed CPG III and Draft RMAN III". In addition, between 17 and 22 other companies currently are manufacturing strapping products and could be using recovered materials. EPA requests information on other manual-grade strapping manufacturers using recovered materials.

There are no specifications unique to strapping containing recovered materials. Rather, this item is manufactured to meet ASTM specifications and guides for strapping. These include D 3953, "Standard Specification for Strapping, Flat Steel and Seals," D 3950, "Standard Specification for Strapping, Nonmetallic (and Joining Methods)," and D 4675, "Standard Guide for Selection and Use of Flat Strapping Materials." The federal Commercial Item Descriptions for strapping have been replaced with ASTM D 3953 and D 3950.

c. *Impact of government procurement.* EPA is aware of at least four Federal agencies that use manual-grade strapping in palletizing operations: DLA, DOD, GSA, and USPS. While EPA was not able to obtain quantified information about their purchases, several agency contacts confirmed that DLA, DOD, and GSA procure strapping directly. GSA offers strapping products through its Supply Catalog, and DLA is in the process of making strapping products a regularly stocked item.

## IX. Designated Item Availability

EPA has identified a number of manufacturers and vendors of the items proposed for designation in today's rule. Once the item designations in today's proposal become final, these lists will be placed in the RCRA docket for this action and will be posted on EPA's Internet web page. They will be updated periodically as new sources are identified and product information

changes. Procuring agencies should contact the manufacturers and vendors directly to discuss their specific needs and to obtain detailed information on the availability and price of recycled products meeting those needs.

Other information is available from the GSA, DLA, State and local recycling offices, private corporations, and trade associations. Refer to Appendix II of the document, "Background Document for Proposed CPG III and Draft RMAN III," located in the RCRA public docket, for more detailed information on these sources of information.

## X. Items Dropped from Further Consideration

EPA considered the following items for proposed designation but, based on the available information, has determined that it would be inappropriate to designate them at this time. Included is a brief explanation of the basis for this determination. EPA requests additional information about these products demonstrating that they should be reconsidered for possible future designation.

*Recycled Ink*—EPA contacted numerous printers, ink manufacturers, and printing trade associations, but was able to identify only one potential recycled ink manufacturer. Thus, EPA has concluded that this item currently is not commonly available containing recovered materials.

*Shotgun Shells*: Two technical issues exist with regard to designating shotgun shells. First, shotgun shells are manufactured with an impact extrusion process that is highly sensitive to any contaminants in the plastic resin, which precludes the use of recovered plastics. Second, shotgun shells are subject to more than 15,000 pounds per square inch of pressure when a shotgun is fired and manufacturers are hesitant to introduce any impurities that may impair the integrity of the shotgun shell and result in a potentially fatal injury.

## XI. Regulatory Assessments

### A. Requirements of Executive Order 12866

Executive Order 12866 (58 FR 51735, October 4, 1993) requires agencies to determine whether a regulatory action is "significant," and thus subject to Office of Management and Budget (OMB) review and the requirements of this Executive Order. The Executive Order defines a "significant" regulatory action as one that is likely to result in a rule that may: (1) have an annual effect on

the economy of \$100 million or more or adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of the Executive Order, it has been determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review."

EPA estimates that the costs associated with this proposed rule are well below the \$100 million threshold. To enable the Agency to evaluate the potential impact of today's action, EPA has prepared an Economic Impact Analysis (EIA), as discussed below. For more information on the estimated economic impact of this proposed rule, see the "Economic Impact Analysis for the Proposed Comprehensive Procurement Guideline III," located in the RCRA public docket for the proposed rule.

### 1. Summary of Costs

As shown in Table 2 below, EPA estimates that the annualized costs of today's rule will range from \$6.5 to \$13 million, with costs being spread across all procuring agencies (i.e., Federal agencies, State and local agencies that use appropriated Federal funds to procure designated items, and contractors to all three). These costs are annualized over a 10-year period at a 3 percent discount rate. Because there is considerable uncertainty regarding several of the parameters that drive the costs, EPA conducted sensitivity analyses to identify the range of potential costs of today's rule. Thus, high-end and low-end estimates are presented along with the best estimate. The primary parameter affecting the range of cost estimates is the number of products each procuring agency is assumed to procure each year. Details of the costs associated with this proposed rule are provided in the EIA for this rule.

TABLE 2.—SUMMARY OF ANNUALIZED COSTS OF CPG AMENDMENTS TO ALL PROCURING AGENCIES

Procuring agency	Total annualized costs (\$1000)	Best estimate total annualized costs (\$1000)
Federal Agencies .....	\$8,244–\$4,122	\$8,244
States .....	1,647–823	1,647
Local Governments .....	2,993–1,497	2,245
Contractors .....	115–57	86
Total .....	12,999–6,499	12,222

As a result of today's proposed rule, procuring agencies will be required to perform certain activities pursuant to RCRA section 6002. The costs shown in Table 2 represent the estimated annualized costs associated with these activities, which include: rule review and implementation; estimation, certification, and verification of designated item procurement; and for Federal agencies, reporting and record keeping. Table 2 also includes estimates for Federal agencies that will incur costs for specification revisions and affirmative procurement program modification. More details of the costs associated with today's rule are included in the EIA.

With regard to possible impacts to business, including small businesses, there may be both positive and negative impacts to individual businesses. EPA anticipates that this proposed rule will provide additional opportunities for recycling businesses to begin supplying recovered materials to manufacturers and products made from recovered materials to procuring agencies. In addition, other businesses, including small businesses, that do not directly contract with procuring agencies may be affected positively by the increased demand for recovered materials. These include businesses involved in materials recovery programs and materials recycling. Municipalities that run recycling programs also are expected to benefit from increased demand for certain recovered materials.

EPA is unable to determine the number of businesses, including small businesses, that may be adversely impacted by this proposed rule. It is possible that if a business that currently supplies products to a procuring agency uses virgin materials only, the designation proposed in CPG III may reduce its ability to compete for future contracts. However, the proposed CPG III item designations will not affect existing purchase orders, nor will they preclude businesses from adapting their product lines to meet new specifications or solicitation requirements for products

containing recovered materials. Thus, many businesses, including small businesses, that market to procuring agencies have the option to adapt their product lines to meet specifications.

## 2. Product Cost

Another potential cost of today's action is the possible price differential between an item made with recovered materials and an equivalent item manufactured using virgin materials. Relative prices of recycled content products compared to prices of comparable virgin products vary. In many cases, recycled content products are less expensive than their virgin counterparts. In other cases, virgin products have lower prices than recycled content products. Many factors can affect the price of various products. For example, temporary fluctuations in the overall economy can create oversupplies of virgin products, leading to a decrease in prices for these items. Under RCRA section 6002(c), procuring agencies are not required to purchase a product containing recovered materials if it is only available at an unreasonable price.

## 3. Summary of Benefits

EPA anticipates that this rule will result in increased opportunities for recycling and waste prevention (e.g., from refurbishing industrial drums). Waste prevention can reduce the nation's reliance on natural resources by reducing the amount of materials used in making products. Less raw materials use results in a commensurate reduction in energy use and a reduction in the generation and release of air and water pollutants associated with manufacturing. Additionally, waste prevention leads to a reduction in the environmental impacts of mining, harvesting, and other extraction processes.

Recycling can effect the more efficient use of natural resources. For many products, the use of recovered materials in manufacturing can result in significantly lower energy and material

input costs than when virgin raw materials are used; reduce the generation and release of air and water pollutants often associated with manufacturing; and reduce the environmental impacts of mining, harvesting, and other extraction of natural resources. For example, according to information published by the Steel Recycling Institute, recycling one ton of steel saves nearly 11 million Btus of energy; 2,500 lbs. of ore; 1,000 lbs. of coal; and 40 lbs. of limestone. Recycling can also reduce greenhouse gas emissions associated with manufacturing new products. When compared to landfilling, recycling one ton of HDPE, LDPE, or PET plastic can reduce greenhouse gas emissions by up to 0.64 metric tons of carbon equivalent (MTCE). In addition to conserving nonrenewable resources and reducing the environmental impacts associated with resource extraction and processing, recycling also can divert large amounts of materials from landfills, conserving increasingly valuable space for the management of materials that truly require disposal.

By purchasing products made from recovered materials, government agencies can increase opportunities for realizing these benefits. On a national and regional level, today's proposed rule can result in expanding and strengthening markets for materials diverted or recovered through public and private collection programs. Also, since many State and local governments, as well as private companies, reference EPA guidelines when purchasing designated items, this rule can result in the increased purchase of recycled products, locally, regionally, and nationally, and can provide opportunities for businesses engaged in recycling activities.

## *B. Unfunded Mandates Reform Act of 1995 and Consultation with State, Local, and Tribal Governments*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), P.L. 104–4, establishes requirements for Federal

agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202, EPA generally must prepare a written statement, including cost-benefit analysis, for proposed and final rules with Federal mandates that may result in estimated costs to State, local, or tribal governments in the aggregate, or to the private sector, of \$100 million or more in any one year. When such a statement is required for EPA rules, under section 205 of the Act, EPA must identify and consider alternatives, including the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. EPA must select that alternative, unless the Administrator explains in the final rule why it was not selected or it is inconsistent with law. Before EPA establishes regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must develop under section 203 of the Act a small government agency plan. The plan must provide for notifying potentially affected small governments, giving them meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising them on compliance with the regulatory requirements.

EPA has determined that today's proposed rule does not include a Federal mandate that may result in estimated annualized costs of \$100 million or more to either State or local or tribal governments in the aggregate, or to the private sector. To the extent enforceable duties arise as a result of this proposed rule on State and local governments, they are exempt from inclusion as Federal intergovernmental mandates if such duties are conditions of Federal assistance. Even if they are not conditions of Federal assistance, such enforceable duties do not result in a significant regulatory action being imposed upon State and local governments since the estimated aggregate cost of compliance for them are not expected to exceed, at the maximum, \$4.6 million annually. The cost of enforceable duties that may arise as a result of today's proposed rule on the private sector are estimated not to exceed \$115,000 annually. Thus, the proposed rule is not subject to the written statement requirement in sections 202 and 205 of the Act.

The designated items included in the proposed CPG III may give rise to additional obligations under section 6002(I) (requiring procuring agencies to

adopt affirmative procurement programs and to amend their specifications) for state and local governments. As noted above, the expense associated with any additional costs is not expected to exceed, at the maximum, \$4.6 million annually. In compliance with Executive Order 12875 entitled Enhancing the Intergovernmental Partnership, 58 FR 58093 (October 28, 1993), which requires the involvement of State and local governments in the development of certain Federal regulatory actions, EPA conducts a wide outreach effort and actively seeks the input of representatives of state and local governments in the process of developing its guidelines.

When EPA proposes to designate items in a CPG, information about the proposal is distributed to governmental organizations so that they can inform their members about the proposals and solicit their comments. These organizations include the U.S. Conference of Mayors, the National Association of Counties, the National Association of Towns and Townships, the National Association of State Purchasing Officials, and the American Association of State Highway and Transportation Officials. EPA also provides information to potentially affected entities through relevant recycling, solid waste, environmental, and industry publications. In addition, EPA's regional offices sponsor and participate in regional and state meetings at which information about proposed and final designations of items in a CPG is presented. Finally, EPA has sponsored buy-recycled education and outreach activities by organizations such as the U.S. Conference of Mayors, the Northeast Recycling Council, the Environmental Defense Fund, Keep America Beautiful, and the California Local Government Commission, whose target audience includes small governmental entities.

The requirements do not significantly affect small governments, because they are subject to the same requirements as other entities whose duties result from today's rule. As discussed above, the expense associated with any additional costs to State and local governments is not expected to exceed, at the maximum, \$4.6 million annually. The requirements do not uniquely affect small governments because they have the same ability to purchase these designated items as other entities whose duties result from today's rule. Additionally, use of designated items affects small governments in the same manner as other such entities. Thus, any applicable requirements of section 203 of the Act have been satisfied.

### C. Impacted Entities

RCRA section 6002 applies to procuring agencies that use at least a portion of Federal funds to procure over \$10,000 worth of a designated product in a given year. EPA estimates that this rule would apply to 35 Federal agencies, all 56 states and territories, and 1,900 local governments. EPA calculated the number of local entities that would be impacted based on information regarding the amount of Federal funds that are dispersed to specific counties. In addition, EPA assumed that between 200 and 1,000 contractors may be affected. A description of this information is provided in the EIA for today's proposed rule.

### D. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996) whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities.

SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities. The following discussion explains EPA's determination.

In the case of small entities which are small governmental jurisdictions, EPA has concluded that the proposal, if promulgated, will not have a significant economic impact. EPA concluded that no small government with a population of less than 50,000 is likely to incur costs associated with the designation of the 19 items because it is improbable that such jurisdictions will purchase more than \$10,000 of any designated item. Consequently, RCRA section 6002 would not apply to their purchases of designated items. Moreover, there is no evidence that complying with the requirements of RCRA section 6002 would impose significant additional costs on the small governmental entity to comply in the event that a small governmental jurisdiction purchased more than \$10,000 worth of a designated item. This is the case

because in many instances items with recovered materials content may be less expensive than items produced from virgin material.

Furthermore, EPA similarly concluded that the economic impact on small entities that are small businesses would not be significant. Any costs to small businesses that are "procuring agencies" (and subject to RCRA section 6002) are likely to be insubstantial. RCRA section 6002 applies to a contractor with a Federal agency (or a state or local agency that is a procuring agency under section 6002) when the contractor is purchasing a designated item, is using Federal money to do so, and exceeds the \$10,000 threshold. There is an exception for purchases that are "incidental to" the purposes of the contract, i.e., not the direct result of the funds disbursement. For example, a courier service contractor is not required to purchase re-refined oil and retread tires for its fleets because purchases of these items are incidental to the purpose of the contract. Therefore, as a practical matter, there would be very limited circumstances when a contractor's status as a "procuring agency" for section 6002 purposes would impose additional costs on the contractor. Thus, for example, if a State or Federal agency is contracting with a supplier to obtain a designated item, then the cost of the designated item (any associated costs of meeting section 6002 requirements) to the supplier presumably will be fully recovered in the contract price. Any costs to small businesses that are "procuring agencies" (and subject to section 6002) are likely to be insubstantial. Even if a small business is required to purchase other items with recovered materials content, such items may be less expensive than items with virgin content.

Therefore, I hereby certify that this rule will not have a significant economic impact on a substantial number of small entities. This rule, therefore, does not require a regulatory flexibility analysis. The basis for EPA's conclusions that today's proposed rule, if adopted, will not have a significant impact on a substantial number of small entities is described in greater detail in the EIA for the proposed rule.

While not a factor relevant to determining whether the proposed rule will have a significant impact for RFA purposes, EPA believes that the effect of today's proposed rule would be to provide positive opportunities to businesses engaged in recycling and the manufacture of recycled products. Purchase and use of recycled products by procuring agencies increase demand

for these products and result in private sector development of new technologies, creating business and employment opportunities that enhance local, regional, and national economies. Technological innovation associated with the use of recovered materials can translate into economic growth and increased industry competitiveness worldwide, thereby, creating opportunities for small entities.

#### *E. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

The Executive Order "Protection of Children from Environmental Health Risks and Safety Risks (62FR19885, April 23, 1997), applies to any rule that EPA determines (1) "economically significantly" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effect of the planned rule on children; and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

EPA interprets E.O. 13045 as encompassing only those regulatory actions that are risk based or health based, such that the analysis required under section 5-501 of the E.O. has the potential to influence the regulation. This rule is not subject to E.O. 13045 because it is not an economically significant regulatory action and does not involve decisions regarding environmental health or safety risks.

#### *F. The National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Pub. L. 104-113, § 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking does not involve technical standards such as testing methods, sampling procedures or

specifications for analyzing the recovered materials content of designated items. Therefore, EPA did not consider the use of any voluntary consensus standards.

#### *G. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments*

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If the mandate is unfunded, EPA must provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

This rule does not significantly or uniquely affect the communities of Indian tribal governments.

#### **XII. Supporting Information and Accessing Internet**

The index of supporting materials for today's proposed CPG III is available in the RCRA Information Center (RIC) and on the Internet. The address and telephone number of the RIC are provided in ADDRESSES above. The index and the following supporting materials are available in the RIC and on the Internet:

"Background Document for Proposed CPG III and Draft RMAN III," EPA530-R-98-003, U.S. EPA, Office of Solid Waste and Emergency Response, April, 1998.

"Economic Impact Analysis for Proposed Comprehensive Procurement Guideline III," EPA530-R-98-002, U.S. EPA, Office of Solid Waste and Emergency Response, April, 1998.

Copies of the following supporting materials are available for viewing at the RIC only:

"Recovered Materials Product Research for the Comprehensive

Procurement Guideline III," Draft Report, September 26, 1997.

Follow these instructions to access information electronically:

WWW: <<http://www.epa.gov/epaoswer/non-hw/procure.htm>>

FTP: [ftp.epa.gov](ftp://ftp.epa.gov)

Login: anonymous

Password: your Internet address

Files are located in /pub/epaoswer.

#### List of Subjects in 40 CFR Part 247

Environmental protection, Absorbents, Adsorbents, Awards and plaques; Carpet, Carpet backing; Carpet cushion; Construction products, Flowable fill, Food waste compost, Government procurement; Industrial drums; Landscaping products, Landscaping timbers and posts; Manual-grade strapping, Mats, Nylon carpet, Office products, Park and recreational furniture, Park and recreation products, Plastic clipboards, Plastic file folders, Plastic clip portfolios, Plastic lumber, Plastic presentation folders; Playground equipment; Procurement guidelines, Railroad grade crossing surfaces, Recycling, Signage, Solid plastic binders, Transportation products.

Dated: August 19, 1998.

**Carol M. Browner,**

*Administrator.*

For the reasons discussed in the preamble, EPA proposes to amend 40 CFR part 247 as follows:

#### PART 247—COMPREHENSIVE PROCUREMENT GUIDELINE FOR PRODUCTS CONTAINING RECOVERED MATERIALS

1. The authority citation for part 247 continues to read as follows:

**Authority:** 42 U.S.C. 6912(a) and 6962; E.O. 12873, 58 FR 54911.

2. In § 247.12, add paragraphs (h), (i), (j), and (k) to read as follows:

##### § 247.12 Construction products.

\* \* \* \* \*

(h) Nylon carpet (broadloom and tiles) made with backing containing recovered materials.

(i) Carpet cushion made from bonded polyurethane, jute, synthetic fibers, or rubber containing recovered materials.

(j) Flowable fill containing coal fly ash and/or ferrous foundry sands.

(k) Railroad grade crossing surfaces containing coal fly ash, recovered rubber, or recovered steel.

3. In § 247.14, add paragraphs (c) and (d) to read as follows:

##### § 247.14 Park and recreation products.

\* \* \* \* \*

(c) Park benches and picnic tables containing recovered steel, aluminum, plastic, or concrete.

(d) Playground equipment containing recovered plastic, steel, or aluminum.

4. In § 247.15, revise paragraph (b) and add paragraph (e) to read as follows:

##### § 247.15 Landscaping products.

\* \* \* \* \*

(b) Compost made from yard trimmings, leaves, grass clippings, and/or food waste for use in landscaping, seeding of grass or other plants on roadsides and embankments, as a nutritious mulch under trees and shrubs, and in erosion control and soil reclamation.

\* \* \* \* \*

(e) Plastic lumber landscaping timbers and posts containing recovered materials.

5. In § 247.16, revise paragraph (d) and add paragraphs (h) through (k) to read as follows:

##### § 247.16 Non-paper office products.

\* \* \* \* \*

(d) Plastic-covered binders containing recovered plastic; chipboard and pressboard binders containing recovered paper; and solid plastic binders containing recovered plastic.

\* \* \* \* \*

(h) Plastic clipboards containing recovered plastic.

(i) Plastic file folders containing recovered plastic.

(j) Plastic clip portfolios containing recovered plastic.

(k) Plastic presentation folders containing recovered plastic.

6. In § 247.17, add paragraphs (b) through (g) to read as follows:

##### § 247.17 Miscellaneous products.

\* \* \* \* \*

(b) Sorbents containing recovered materials for use in oil and solvent clean-ups and as animal bedding.

(c) Industrial drums containing recovered steel, plastic, or paper.

(d) Awards and plaques containing recovered glass, wood, paper, or plastic.

(e) Mats containing recovered rubber and/or plastic.

(f)(1) Non-road signs containing recovered plastic or aluminum and road signs containing recovered aluminum.

(2) Sign supports and posts containing recovered plastic or steel.

(g) Manual-grade strapping containing recovered steel or plastic.

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