FINAL

PAPER PRODUCTS RECOVERED MATERIALS ADVISORY NOTICE

Response to Public Comments

Office of Solid Waste
U.S. Environmental Protection Agency
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I. Introduction

A. The Draft Paper Products Recovered Materials Advisory Notice

On March 15, 1995, the U.S. Environmental Protection Agency (EPA) published for public comment a draft Paper Products Recovered Materials Advisory Notice (Paper RMAN, 60 FR 14181). The draft Paper RMAN contained recommendations for procuring agencies to use when purchasing paper and paper products in accordance with section 6002 of the Resource Conservation and Recovery Act of 1976 (RCRA). The recommendations, when final, will supersede EPA's 1988 recommendations for purchasing paper and paper products containing postconsumer recovered materials.

Specifically, the draft Paper RMAN recommended postconsumer and recovered fiber content levels for printing and writing papers, newsprint, tissue products, and paperboard and packaging products. It contained recommendations for measurement of postconsumer and recovered fiber content, specification revisions, and recyclability. It also included definitions of postconsumer fiber, recovered fiber, and mill broke.

EPA received 50 comments on the draft Paper RMAN. These comments can be found in the RCRA Docket, under Docket F-95-PPRN-FFFFF. The docket also contains the supporting analyses for the draft Paper RMAN, "Draft Paper Products RMAN -- Supporting Analyses," February 1995.

The EPA docket for information supporting the final Paper RMAN is F-96-PPRF-FFFFF. EPA placed a summary of the public comments, entitled "Final Summary of Comments on the Proposed Paper Products Recovered Materials Advisory Notice," in this docket.

The RCRA Docket is located at Crystal Gateway, 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia. To review docket materials, the public must make an appointment by calling (703) 603-9230.

In the March 15, 1995 Federal Register, EPA requested comment on the content levels, definitions, and specifications recommendations found in the draft Paper RMAN. In addition, EPA requested comment or information on a number of paper grade-specific issues. This response-to-comments document responds to the issues raised by commenters, identifies the issues on which EPA requested comment, and summarizes commenters' responses to EPA.

B. Overview of the RCRA Requirements

Section 6002 of the Resource Conservation and Recovery Act of 1976 (RCRA) establishes a government agency buy-recycled program. It requires each "procuring agency" subject to the statute to comply with its requirements with

respect to "any purchase or acquisition of a procurement item." These requirements include an obligation to procure items composed of the highest percentage of recovered materials practicable except under defined circumstances. Pub. L. No. 94-580, section 6002(c), 90 Stat. 2822 (1976). Under section 6002(i) each procuring agency is required to develop an affirmative procurement program to "assure that items composed of the recovered materials will be purchased to the maximum extent practicable." Hazardous and Solid Waste Amendments of 1984, Pub. L. No. 98-616, Title V, section 501(a) - (e), 98 3274-76.

RCRA section 6002(e) directs EPA to prepare guidelines for the use of procuring agencies in complying with the statute's requirements and to revise these from time to time. EPA has three responsibilities under section 6002(e): (1) to designate items that are or can be produced with recovered materials; (2) to recommend non-binding procurement practices to assist procuring agencies in developing procurement programs for recovered materials; and (3) to provide certain information on recovered materials and items produced from recovered materials. See National Recycling Coalition, Inc. v. Reilly, 884 F.2d 1431 (D.C. Cir. 1989).

Under the statute, responsibility for complying with the Act's requirements to purchase items with recovered materials content rests with each individual procuring agency. EPA's published recommendations are a first step for procuring agencies, but, as the statute indicates, they are recommended practices, not strict requirements. Procuring agencies must revise their own programs as needed to achieve the statutory goals.

The process EPA followed in developing procurement guidelines included Federal Register notices of proposed and final rulemakings and solicitation of public comments. The final guidelines, including the recommendations for use by procuring agencies, were codified in the Code of Federal Regulations. EPA's rulemaking efforts have proved to be increasingly time-consuming. Revising a guideline and publishing it in the Federal Register may take up to two years or more. EPA consequently determined that inclusion of its recommended procurement practices within the rulemaking effort delayed dissemination of current information about products with recovered materials content and is therefore inconsistent with the statutory objective of promoting markets for these products.

In order to expedite the process of issuing procurement guidelines, Executive Order 12873 directed EPA to change the procedure used for designating items and providing procurement recommendations. Under the Order, EPA issued a regulation, known as a Comprehensive Procurement Guideline (CPG), which contains the item designations. EPA promulgated the CPG on May 1, 1995 (60 FR 21369). In that action, EPA consolidated the existing product designations, including the designation of paper and paper products, into the CPG, which will be codified in 40 CFR Part 247.

Executive Order 12873 also directed EPA to issue

guidance documents, known as Recovered Materials Advisory Notices, which will contain EPA's recommendations for purchasing the designated items. In the May 1, 1995 Federal Register, EPA published the first RMAN, which establishes eight product categories corresponding to the categories used in the CPG. One of these categories, Part A, is reserved for recommendations for paper and paper products. The May 1, 1995 RMAN contained EPA's 1988 recommendations for paper and paper products. The recommendations in the final Paper RMAN will replace the recommendations in the May 1, 1995 RMAN.

C. Overview of the Executive Order Provisions for Paper

Section 504 of Executive Order 12873 requires Federal procuring agencies to purchase selected printing and writing papers meeting or exceeding the following minimum content standards:

- 20 percent postconsumer materials beginning December 31, 1994.

- 30 percent postconsumer materials beginning December 31, 1998.

- As an alternative to these standards, the standard is no less than 50 percent recovered materials that are a waste material by-product of a finished product other than a paper or textile product which would otherwise be disposed of in a landfill, as determined by the State in which the facility is located.

Prior to the Executive Order, it generally was thought that the way to foster greater use of postconsumer materials was to establish high postconsumer and recovered fiber content levels. However, most of the printing and writing paper manufactured in the U.S. is made on the industry's large papermaking machines at vertically integrated mills that produce both wood pulp and paper. Because the operating economics and energy balance at these mills are tied to their use of wood to produce pulp, it is not economically feasible for them to reduce their existing wood pulp-making capabilities significantly in order to substitute high percentages of pulp made from postconsumer or other recovered paper. Paper products meeting the 1988 guideline typically have been produced by the industry's small and medium-sized mills. As a result, the paper industry has been able to manufacture only limited quantities of printing and writing papers meeting the 50% "waste paper" content level recommended in the 1988 paper procurement guideline.

Executive Order 12873 establishes a paradigm shift in the way procuring agencies should establish minimum content standards in order to encourage the large printing and writing paper mills to use postconsumer fiber, too. The Executive Order establishes lower, postconsumer-only content standards for the types of printing and writing papers commonly manufactured by these larger mills. These papers are often referred to as commodity papers and include

reprographic paper, offset paper, forms bond, computer printout paper, and carbonless paper. The Executive Order also establishes a low, postconsumer-only content standard for "specialty" papers such as text and cover papers, cotton fiber papers, and high quality writing and book papers.

In addition, Executive Order 12873 provides that agencies can use an alternative standard of "50% recovered materials that are a waste material byproduct of a finished product other than a paper or textile product." Paper or paper products meeting this standard can only contain a specific subset of recovered materials. Two examples of materials that may meet the alternative standard are sawdust and materials such as cotton linters that are a byproduct of processing cottonseed into oil. Procuring agencies should note that these materials meet the alternative standard only if they would be disposed in a landfill if they were not used in paper products.

EPA encourages state and local government agencies, contractors, and private sector purchasers to adopt the new approach used in Executive Order 12873 in order to ensure uniform recovered material content requirements and to foster greater use of postconsumer fiber by all printing and writing paper mills.

Procuring agencies also should note that the 20% postconsumer content levels established by Executive Order 12873 increase to 30% postconsumer content beginning December 31, 1998. EPA considered including both the 20% and 30% content levels in the Paper RMAN. Because the Paper RMAN differs significantly from the 1988 paper procurement guideline in scope, approach to content levels, and some terminology, EPA concluded that it would be less confusing to agencies if this RMAN incorporates only the 20% content level at this time. EPA plans to issue revised recommendations incorporating the 30% postconsumer content levels in the future.II. Applicability

A. Background

The draft Paper RMAN was issued under section 6002 of the Resource Conservation and Recovery Act of 1976 (RCRA), which requires "procuring agencies" to purchase EPA-designated items containing recovered materials. In RCRA section 1004, "procuring agency" is defined as "any Federal agency, or any State agency of agency of a political subdivision of a State which is using appropriated Federal funds for such procurement, or any person contracting with any such agency with respect to work performed under such contract."

In the draft Paper RMAN, EPA acknowledged that, although EPA's guidance is intended for government purchasing agencies and government contractors, private sector purchasers have been requesting paper and paper products meeting EPA's recommendations. EPA encouraged state and local agencies and private sector purchasers to use EPA's recommendations.

B. Comments and Agency Response

a. Comment. Commenters stated that EPA should limit its recommendations to paper purchases by federal agencies. Many of these commenters stated that there could be adverse impacts from significant private sector demand, including shortages and increased costs of paper containing postconsumer fiber, due to the tight markets for recovered fiber. Commenters further stated that EPA had exceeded its legal authority under RCRA section 6002 by encouraging private sector purchasers to use its recommendations.

Response. RCRA section 6002 directs EPA to provide guidance to "procuring agencies." RCRA defines "procuring agency" as federal agencies, state and local agencies using appropriated federal funds, and government contractors that are purchasing EPA- designated items under their government contracts. Thus, under RCRA, EPA's recommendations are meant for more than just federal agencies. EPA is authorized to provide guidance to state and local government agencies as well as to some private sector purchasers (i.e., government contractors).

Moreover, RCRA section 8003(a) directs EPA to provide information about the use of recovered materials in products, and section 8003(e) specifically directs EPA to provide information on resource recovery. Section 8003 does not limit EPA to disseminating information to government agencies.

In the draft Paper RMAN, EPA acknowledged the marketplace realities that private sector purchasers use EPA's recommendations. EPA stated that it wants to encourage the continued broad use of its recommendations to foster greater demand for paper and paper products containing postconsumer and other recovered fiber. EPA continues to believe that providing information for both government and private sector purchasers will maintain their demand for these products, leading to sustained markets for postconsumer and recovered paper.III. EPA's Objectives

A. Background

EPA identified two objectives for the draft Paper RMAN. First, in RCRA section 6002, Congress requires EPA to provide recommendations that maximize the use of postconsumer recovered materials in paper and paper products. EPA's first objective restates this statutory provision. Second, Congress' goal in section 6002 for paper procurement is to create markets for postconsumer recovered materials. EPA's second objective, which is based on this goal, is to promote paper recycling by increasing both the usage of postconsumer fiber in paper manufacturing and the availability of competitively-priced paper and paper products containing postconsumer and other recovered fiber.

EPA explained that increased demand from both the public and private sector had been driving the significant paper industry investment in equipment and systems to use postconsumer and recovered fiber. As a result, collection of postconsumer and other recovered paper has been increasing to meet demand from pulp and paper mills.

B. Comments and Agency Response

Commenters addressed EPA's objectives as they applied both to paper manufacturing in general and to specific paper products. The general comments are discussed in this section, while product-specific comments are discussed in the product-specific sections below.

a. Comment. Many commenters objected to EPA "mandates," to EPA "forcing" all products to meet a particular content level or content range, and to EPA "micromanaging" the industry.

Response. These commenters ignore and misconstrue EPA's mandate under section 6002 of RCRA and EPA's stated objectives. EPA has consistently stated that its recommendations are guidance for procuring agencies, not a mandatory regulatory program for paper manufacturers. Paper manufacturers are free to use wood-based fiber, recovered fiber, or a mix of the two. They can choose to use recovered fiber in amounts below EPA's recommendations, within recommendations, or exceeding EPA's recommendations. The only "requirement" associated with EPA's designation of paper and paper products and publication of recovered materials recommendations is placed on procuring agencies (not paper manufacturers), who must seek to purchase paper and paper products with the highest percentages of postconsumer materials practicable.

Nothing in RCRA section 6002 or EPA's recommendations requires manufacturers to use postconsumer and recovered fiber. If, however, manufacturers choose to compete for sales of paper and paper products to affected procuring agencies, then they must meet the minimum postconsumer and recovered fiber content specified by those agencies. Manufacturers are free to provide information to the agencies about the postconsumer and recovered fiber content currently available in their products in order to assist the agencies in establishing or revising their content standards. Thus, if paper manufacturers are unable to increase or maintain their postconsumer content because postconsumer recovered paper is in short supply, they should recommend that their customers specify lower postconsumer fiber content.

b. Comment. A commenter stated that EPA's two objective have already been met, as evidenced by the U.S. paper industry's high utilization rate of recovered fiber, and that high content recommendations will not advance the Agency's objectives and may, in fact, hinder them.

Response. EPA agrees that, according to industry statistics, some segments of the domestic paper industry have high recovered fiber utilization rates. EPA further agrees that there has been a tremendous increase in capital expenditures to enable the industry to use recovered fiber and that industry projections show that investment in recycling will continue. However, neither the utilization rates nor the investments mean that the statutory goal of maximizing the use of postconsumer materials in paper

products purchased by government agencies has been achieved. Nor do they mean that all of the fiber generated in the U.S. that could be recovered and used is actually being recovered.

EPA also acknowledges that, for some products, high content recommendations might not advance EPA's objectives. In the supporting analyzes to the draft Paper RMAN, EPA discussed at length how high content recommendations had hindered the increased use of postconsumer fiber in the printing and writing segment of the industry. EPA also requested comments on the feasibility of many of its recommendations in light of the fiber shortages that existed in the spring of 1995. Because the use of high content recommendations could be counter-productive in some instances, EPA is now recommending ranges and strongly urges procuring agencies to research product content and availability prior to establishing content standards.

EPA notes that market prices for recovered paper fluctuated significantly during 1995. When the draft Paper RMAN was published, prices for old corrugated containers (OCC), old newspapers (ONP), and office waste paper (OWP) were increasing, and there were regional shortages of some types of recovered paper. The shortages and high prices were caused by a number of factors, including increased demand for recovered paper by North American mills and by the export market. By the autumn of 1995, however, prices for OCC were falling to historic lows as export demand and domestic demand for containers dropped. The decreasing OCC prices affected the demand and prices of related materials, such as ONP. These fluctuations occurred before the draft EPA guidance was in effect.

Because demand for finished paper products historically is cyclical, EPA believes that there will continue to be fluctuations in recovered paper availability and pricing -- whether or not EPA encourages procuring agencies to establish their content standards at the high end of EPA's recommended ranges.

c. Comment. A commenter stated that EPA is mistaken in its belief that raising demand for "high" postconsumer content products will cause mills to add capacity. The commenter also stated that mills will only add capacity when they can be assured that they will have an adequate supply of fiber at a reasonable cost.

Response. In the supporting analyses to the draft Paper RMAN, EPA stated that a combination of public and private sector demand for paper products containing postconsumer and recovered fiber would provide incentive to the paper industry to invest additional capital in the equipment and systems needed to use this fiber. EPA did not intend to imply, as the commenter suggests, that demand for "high" postconsumer content products was necessary to provide paper manufacturers with an incentive to invest in recycling. Domestic paper industry statistics and capacity surveys, capital improvement announcements in industry publications, and anecdotal information from individual mills, all indicate that the industry is continuing to invest in the

ability to use postconsumer and recovered fiber in response to customer demand for products containing these fibers.

EPA believes that the industry is responding to consumer demand, including government agency demand, for products containing postconsumer and recovered fiber. There will continue to be periodic and/or cyclical short-term fluctuations in fiber availability and pricing, however, as new mill, paper machine, or deinking system start-ups cause demand to temporarily exceed supply.

d. Comment. A commenter stated that EPA must provide a more clearly defined objective for the RMAN. The commenter offered three interpretations of EPA's stated objectives, and concludes that every possibility is either irresponsible or ineffective: (1) increase the diversion and recovery of paper from the waste stream, (2) increase the value of postconsumer materials in order to make it financially viable for local governments to divert or recover such materials and to help subsidize their operations, and (3) ensure market availability of recycled content paper for all potential applications.

Response. One of the Congress' stated objectives for RCRA is the conservation of valuable material resources [section 1003(a)]. This objective is to be met by, among other things, establishing a cooperative effort among government agencies and private enterprise in order to recover valuable materials from solid waste. Recovery is not limited to the diversion and collection of materials that would otherwise be disposed in landfills or incinerated. Rather, it includes the procurement of products containing recovered materials in order to complete the collection-manufacturing-procurement loop that represents recycling. Congress specifically directed EPA to provide guidance to government agencies which shall provide for maximizing the use of postconsumer recovered materials.

Implicit in Congress' stated objectives are elements of the "objectives" specified by the commenter. Government and private sector procurement of paper and paper products containing postconsumer fiber has increased the paper industry's usage of this material and the demand for it, which will, in turn, increase its diversion and recovery. EPA's objectives for its content recommendations do not include increasing prices and subsidizing local government programs, although the value of the recovered paper increases as a corollary to increased demand. As 1995 recovered paper prices demonstrated, the pricing fluctuates with global market demand. Finally, EPA's guidance reflects the market availability of items purchased by government agencies. It is neither Congress' objective, nor EPA's, however, to mandate that every type of paper and paper product contain postconsumer fiber.

e. Comment. Several commenters agreed with EPA's objectives as stated in the draft Paper RMAN.IV. EPA's Approach to Recommendations

A. Background

The approach used in the draft Paper RMAN differed in

two respects from the approach used in the 1988 paper procurement guideline. First, EPA recommended two-part content levels, consisting of a postconsumer fiber component and a recovered fiber component. Second, for many products, EPA recommended content ranges for each fiber component. Both the two-part recommendations and the ranges reflected the diversity of fiber usage among mills.

In the preamble to the draft Paper RMAN, EPA explained that Executive Order 12873 directs the Agency to present "the range of recovered materials content levels within which the designated recycled items are currently available." EPA stated that, in meeting this provision, it will recommend ranges, where possible, that (1) reflect the best information available to the Agency about the use of postconsumer and other recovered fiber in the manufacture of paper and paper products and (2) encourage manufacturers to use the maximum amount of postconsumer and recovered fiber without compromising competition or product performance and availability. EPA recommended that procuring agencies uses these ranges, in conjunction with their own research into the content of items available to them, to establish their minimum content standards. EPA added that, in some instances, it would recommend one level, rather than a range, because the item is universally available at that recommended level. EPA recommended that, in such cases, procuring agencies use that level in establishing their minimum content standards.

In the preamble to the draft Paper RMAN, EPA also recommended "that purchasers establish their minimum content standards at the highest percentages available to them that achieve their price and performance objectives, even if these standards are above EPA's recommended ranges." EPA stated that "private sector purchasers may be able to find paper and paper products available only at the lower end of the ranges, because the large quantities of paper that these purchasers need will be manufactured mainly by mills that use only lower levels of postconsumer and recovered fiber."

B. Comments and Agency Response

a. Comment. While some commenters supported the concept of two-part content levels, other commenters objected to the approach. Several commenters stated that two-part levels are inconsistent with the new and planned capacity designed for postconsumer feedstocks and represented an additional impediment to new investments. These commenters favored a postconsumer-only content standard. Conversely, several commenters stated that it is not necessary to establish separate postconsumer fiber content levels when high recovered fiber content levels are used because mills will maximize postconsumer fiber use. Similarly, commenters stated that a single recovered fiber content level is preferable because it would simplify accounting and reporting requirements.

Response. EPA addressed these arguments in "Draft Paper Products RMAN -- Supporting Analyses" (see pages 7-8). Commenters did not submit any new information demonstrating that their preferred approach would be a better means to

meet the Congressional directive to maximize the use of postconsumer materials.

While EPA agrees that much of the new and planned capacity is designed for postconsumer feedstock, EPA continues to believe that a single, postconsumer level fails to acknowledge the continuing contribution to solid waste management and the investments made by mills that have been using all recovered materials, regardless of source, that require deinking, cleaning, or processing prior to use.

Further, if the draft Paper RMAN had simply recommended a high two-part standard instead of ranges, EPA could understand the concern about impediment to investment by large, integrated, wood-fiber based mills. By using ranges whose low end is set at levels that can be met by the simple majority of mills using postconsumer and recovered fiber, EPA is acknowledging that wood-based paper mills will use only low percentages of postconsumer fiber.

Paper companies readily acknowledge that they are investing in the capacity to use postconsumer and other recovered fiber because of customer demand. If purchasers of large quantities of paper and paper products, particularly private sector purchasers, find that paper or paper products in the quantities needed may be available and cost-effective only containing lower levels of postconsumer fiber, they will establish low, postconsumer fiber content standards. This, in turn, will continue to provide an incentive to mills to use postconsumer fiber to meet customer demand.

b. Comment. Several commenters stated that EPA should recommend a specific content level, rather than ranges, because purchasing agents are likely to comply only with standards that are clear and simply stated. Other commenters stated that ranges provide flexibility to purchasers, reflect the diversity in the market and agreed with EPA's cautionary advice that products will tend to be more widely and economically available at the lower end of the range.

Response. It has been EPA's experience with the 1988 paper recommendations that purchasing agencies use EPA's recommendations as a starting point in setting their own content standards. When EPA recommended a single content level, many purchasing agencies found that paper and paper products meeting EPA's recommended level were not available in their local markets or were not available at a reasonable price. As discussed in the background section above, Executive Order 12873 directs EPA to recommend ranges. In addition, EPA believes that ranges will provide purchasers with flexibility in setting content standards that both meet their needs and can be found in the purchasers' local markets.

c. Comment. Two commenters suggested the use of goals as an alternative to ranges or minimum content standards. One recommended purchasing goals that could be met by averaging the recycled-content of products purchased during a given timeframe. The other suggested aggregate recovered

paper utilization goals rather than sheet-by-sheet content goals.

Response. EPA addresses content averages below in the response to comments on the newsprint recommendations in the draft Paper RMAN.

RCRA section 6002 establishes a government agency procurement preference program, not national utilization goals for paper manufacturers to meet. EPA believes that it is beyond the scope of the Agency's authority under section 6002 to establish aggregate utilization goals for manufacturers to meet.

d. Comment. Commenters stated that the collection of postconsumer paper is not keeping up with U.S. and global demand, so manufacturers need to have the flexibility to alter their utilization of postconsumer fiber in response to these market conditions.

Response. EPA's primary reason for recommending ranges for most items is the diversity in mills' use of postconsumer and recovered fiber. However, the use of ranges also provides mills with flexibility to vary their usage of postconsumer and recovered fiber and still meet EPA's recommendations. Also, if EPA finds that the postconsumer and other recovered fiber content of paper and paper products has changed, EPA will consider revising its recommended content levels.V. EPA's Methodology

A. Background

In the draft Paper RMAN, EPA recommended ranges, as appropriate, for both the postconsumer and recovered fiber components for each item. The high end of each range was set at the maximum content currently used in paper and paper products that are available in sufficient quantities, and with adequate competition, to meet procuring agency needs. EPA noted that, for many items, 100% recovered fiber was the highest content level available. The low end of each range was set at levels that can be met by the simple majority of mills currently producing paper and paper products containing postconsumer and recovered fiber. EPA noted that for most items, these levels would be higher than the lowest percentage currently in use, in order to provide an incentive for paper mills that now primarily use wood-based fiber to increase their usage of postconsumer and recovered fiber.

EPA also acknowledged the shortages and high prices of OCC, ONP, and OWP that existed in the spring of 1995. EPA requested information about the impact of the shortages/pricing on mills' ability to meet the high end of the ranges. While many commenters discussed the fiber problems, very few of them provided specific information indicating how EPA's recommendations should be revised.

B. Comments and Agency Response

a. Comment. No commenters objected to EPA's methodology. Instead, paper industry commenters objected

either to EPA's recommending content levels at all or to the high end of some of the ranges. Their comments were based on the shortages of OCC and ONP they had recently experienced. They feared that the supply of recovered fiber would be inadequate if all purchasers were to specify that products meet the high end of EPA's recommended ranges.

Response. The recommendations in the Paper RMAN are guidance to purchasers, not mandatory content levels for paper manufacturers. In the preamble to the draft Paper RMAN, EPA encouraged both public and private sector purchasers to establish their own minimum content standards at the highest levels practicable. EPA emphasized that "if a product is not available at a competitive price and at a content level at the high end of the range, purchasers should set their standards at the highest levels available to them that meet their price and performance objectives." It is clear from the data provided by paper manufacturers that not all purchasers will be able to purchase products containing the highest recommended levels of postconsumer and other recovered fiber. In these instances, the "highest level practicable" may be a level somewhat lower than the high end of EPA's recommended range. Paper manufacturers should be able to produce paper and paper products meeting the low end of the ranges, even in periods of restricted supplies of recovered paper.VI. Recommendations for Printing and Writing Papers

A. Background

In Executive Order 12873, President Clinton established 20% postconsumer content standards for uncoated printing and writing papers commonly used by government agencies. Specifically, the Executive Order established a 20% postconsumer content standard for high speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, and white wove envelopes. It established a content standard of 50% recovered materials, including 20% postconsumer materials, for writing and office paper, book paper, cotton fiber paper, and text and cover. EPA incorporated these content standards into the draft Paper RMAN. The postconsumer content levels increase to 30% beginning December 31, 1998.

In the draft Paper RMAN, EPA used different terminology for uncoated printing and writing papers from that used in the 1988 paper procurement guideline. The new terms better reflect the terminology currently used by paper merchants and mills. In addition, EPA recommended content levels for coated printing papers, bristols, and additional uncoated printing and writing papers.

On March 25, 1996, President Clinton amended Executive Order 12873 to change the 50% recovered materials requirement for writing and office paper, book paper, cotton fiber paper, and text and cover papers to a 20% content standard. (See Executive Order 12995, 61 FR 13645, 3/28/96.) As a result, in the final Paper RMAN, EPA is recommending that these items contain 20% recovered fiber, all of which is postconsumer fiber.

Tables A-1a, A-1b, and A-1c contain the recommendations

for printing and writing papers from the draft Paper RMAN.

Table A-1a. -- Recommended Recovered Fiber Content Levels for Uncoated Printing and Writing Papers

Item	Recovered Fiber (%)	Postconsumer Fiber (%)
Reprographic Paper (e.g., mimeo and duplicator paper, high-speed copier paper, and bond paper*)	20	20
Offset Paper (e.g., offset printing paper*, book paper*, bond paper*)	20	20
Tablet Paper (e.g., office paper such as note pads, stationery* and other writing* papers)	20	20
Forms Bond (e.g., forms, computer printout paper, ledger*)	20	20
Envelope Paper		
Wove	20	20
Kraft		
White and colored (including manila)	10 - 20	10 - 20
Unbleached	10	10
Cotton Fiber Paper (e.g., cotton fiber papers, ledger*, stationery* and matching envelopes, and other writing* papers)	50	20
Text & Cover Paper (e.g., cover stock, book paper*, stationery* and matching envelopes, and other writing* paper)	50	20
Supercalendered	10	10
Check Safety Paper	10	10

* These items can be made from a variety of printing and writing papers, depending on the performance characteristics of the item. Some of the papers are a commodity-type and some are specialty papers. EPA recommends that procuring agencies determine the performance characteristics required of the paper prior to establishing minimum content standards. For example, bond, ledger, or stationery made from cotton fiber paper or a text & cover paper have different characteristics than similar items made from

commodity papers.

Table A-1b. -- Recommended Recovered Fiber Content Levels for Coated Printing and Writing Papers

Item	Recovered Fiber (%)	Postconsumer Fiber (%)
Coated Printing Paper	10	10
Carbonless	20	20

Table A-1c. -- Recommended Recovered Fiber Content Levels for Bristols

Item	Recovered Fiber (%)	Postconsumer Fiber (%)
File Folders (manila and colored)	20	20
Dyed Filing Products	20 - 50	20
Cards (index, postal, and other, including index sheets)	50	20
Pressboard Report Covers and Binders	50	20
Tags and Tickets	20 - 50	20

B. Comments and Agency Response

a. Comment. Commenters suggested that EPA recommend content levels different from those established in Executive Order 12873. Suggestions ranged from lowering the postconsumer content level to 10%, to recommending recovered fiber levels only, to using ranges for printing and writing papers.

Response. As explained in the supporting analyses document for the draft Paper RMAN, Executive Order 12873 establishes a paradigm shift in the way procuring agencies should establish minimum content standards in order to encourage large printing and writing paper mills to use postconsumer fiber. Because it is not feasible from a cost or energy perspective to use high levels of postconsumer or recovered fiber in vertically integrated mills that produce both wood pulp and paper, the Executive Order established lower, postconsumer-only content standards.

No commenters submitted evidence that the alternatives they suggested could or would result in increased usage of postconsumer fiber in the manufacture of printing and writing papers. However, large mills have been producing printing and writing papers meeting or exceeding the 20%

content level. Additional deinked pulp capacity is coming on- line, both at integrated mills and as market pulp. EPA acknowledges that this pulp sometimes may be more expensive than market wood pulps in the short-term as prices of recovered paper fluctuate. EPA believes that increased collection of recovered paper should result in more stable prices in the long-term.

b. Comment. Commenters generally agreed with the 20% postconsumer content level for uncoated printing and writing papers. A commenter urged EPA to recommend two-part content levels, using ranges, for reprographic paper, offset paper, tablet paper, forms bond, and envelope paper.

Response. As explained in a. above, the commenter did not submit evidence that this alternative approach would increase usage of postconsumer fiber. Federal and state agency experience with two-part content levels, consisting of a higher recovered fiber component and a lower postconsumer content level, has shown that overall usage of postconsumer fiber is not maximized. Smaller and medium-sized mills manufacture products meeting these levels, but large, integrated mills have no incentive to use postconsumer and other recovered fiber because it is not economical or energy-efficient for them to meet the 50% recovered content level.

c. Comment. Commenters stated that EPA should indicate that Executive Order 12873 increases the postconsumer content level to 30% beginning on December 31, 1998. One commenter suggested that the inclusion of the 30% level in the RMAN would provide paper manufacturers with sufficient notice that they will be able to meet this level in 1998.

Response. EPA believes that listing both the 20% and the 30% content levels at this time will create confusion. It also is unnecessary because federal agencies must purchase printing and writing papers containing the levels of postconsumer fiber specified in Executive Order 12873 regardless of whether these levels are listed in EPA's Paper RMAN. EPA will revise the Paper RMAN periodically to reflect changes in the postconsumer and other recovered fiber content of paper and paper products. Next year, EPA will issue a draft revision to the RMAN to reflect the 30% content level that applies to Federal agencies at the end of 1998.

Executive Order 12873 was issued in 1993. Because it provided manufacturers of printing and writing papers with notice that Federal agencies would begin purchasing papers containing 30% postconsumer fiber beginning in 1998, it is not necessary for EPA to do so in the Paper RMAN.

d. Comment. In response to an EPA request for information about the use of postconsumer and other recovered fiber in greeting cards, commenters noted that several grades of paper can be used to manufacture greeting cards. One commenter noted that it manufactured greeting card stock meeting the 50/20 standard in Executive Order 12873. Other commenters stated that greeting cards can be made from papeteries, which is a unique paper grade, and

recommended that papeteries be categorized as a type of offset paper.

Response. The first commenter's product is already included in the Paper RMAN as either text and cover paper or cotton fiber paper.

According to the Dictionary of Paper and the Pulp & Paper Dictionary, papeterie paper is a class of papers used for greeting cards. Papeteries are made from cotton fiber or chemical wood pulps or mixtures of both. They also are used for correspondence and can be given special treatments, such as embossing and watermarking. They have low strength, high bulk, and good folding qualities. One of the commenters stated that papeteries differ from text and cover papers by (1) the need for sizing requirements for both writing inks and offset printing inks and (2) the absence of a corresponding cover grade.

EPA is adding papeteries as a separate printing and writing paper grade in Table A-1a of the final Paper RMAN. Consistent with the change to Executive Order 12873, EPA is recommending a 20% postconsumer fiber content level for papeteries.

e. Comment. Manufacturers of cotton fiber paper agreed with EPA's recommended content level for their product. They requested that EPA clarify that the definition of "recovered fiber" includes recovered cotton fiber, including linters.

Response. In the supporting analyses to the draft Paper RMAN, EPA stated that the recovered fiber component of cotton fiber papers "can consist of fiber derived from cotton linters, cotton or linen textiles, or similar materials, as well as from recovered paper. Similarly, the postconsumer fiber can be derived either from postconsumer cotton fiber materials or postconsumer paper. Procuring agencies also can choose to use the Executive Order's alternative standard when purchasing cotton fiber papers." See page 49 of "Draft Paper Products RMAN -- Supporting Analyses," February 1995.

As a result of the revision to Executive Order 12873 discussed in the Background section above, the final Paper RMAN recommends that cotton fiber paper contain 20% postconsumer fiber. This fiber content would be in addition to the 25% recovered cotton or linen used in this item. Because the final Paper RMAN only addresses the postconsumer fiber content of cotton fiber papers, EPA does not believe that it is necessary to revise the definition of "recovered fiber."

f. Comment. Commenters stated that the content level for text and cover papers should be 20% postconsumer fiber, rather than 50% recovered fiber, including 20% postconsumer fiber. Commenters stated that the content levels for text and cover papers will place manufacturers of these products at a competitive disadvantage because of the high cost of postconsumer and other recovered fiber. Text and cover papers compete with offset papers for some applications.

Under the draft content levels, integrated manufacturers of offset paper will be allowed to use a high percentage of wood pulp, which is cheaper than postconsumer pulp. This will give them a cost and quality advantage over non-integrated producers of text and cover papers.

Response. As discussed in the Background section above, the revision to Executive Order 12873 changed the content standard for text and cover papers and other specialty papers to a 20% postconsumer content standard. In the final Paper RMAN, EPA revised Table A-1a to recommend a 20% recovered fiber/20% postconsumer fiber content level for cotton fiber papers and text and cover papers. This recommendation means that these papers should contain 20% recovered fiber, all of which is postconsumer fiber.

g. Comment. A commenter asked whether the scope of the supercalendered paper listing in the draft Paper RMAN is limited to supercalendered printing and writing papers. The commenter manufacturers a line of supercalendered papers used for pressure sensitive backing papers and glassine used for envelope windows and direct food contact packaging. The commenter stated that the use of recovered fiber is not appropriate in these products because it would interfere with the silicone curing process that gives backing papers its release properties and due to concerns associated with potential contamination of food products.

Response. EPA's recommended postconsumer and recovered fiber content levels apply only to supercalendered printing and writing papers. Procuring agencies do not directly purchase backing paper and glassine. Purchases of these items are incidental to the purchase of pressure sensitive labels or window envelopes.

EPA does not have information with which to assess the commenter's statements about technical limitations on the use of recovered fiber in backing papers or glassine used in food packaging applications. EPA notes that other food packaging products do contain as much as 100% recovered fiber, although these products generally are used to package dry foods such as pasta and cereals. Refer to the response to comments on the draft recommendations for paperboard and packaging found in Section IX of this document.

h. Comment. Commenters agreed with the draft 10% postconsumer content level for supercalendered papers.

Response. EPA is retaining this recommendation in the final Paper RMAN.

i. Comment. Several commenters requested that EPA recommend a 10% postconsumer fiber content level for machine finish (MF) papers. They stated that MF papers are a grade of uncoated groundwood papers that are used in similar printing applications as supercalendered and lightweight coated groundwood papers. Pricing for all three papers is very similar. These commenters stated that EPA should recommend the same content level for MF papers as the other two products because any differences among these grades could create market imbalances detrimental both to the paper

manufacturers and to the primary users of these grades, magazine publishers.

Response. EPA requested and received additional information about MF papers from the American Forest & Paper Association (AF&PA). Approximately 1.3 million tons of MF uncoated groundwood paper are produced in the U.S. annually. This grade is manufactured primarily at integrated mills. The percentage of postconsumer fiber used varies between 5 and 50%. Some mills report no problems with using postconsumer fiber, while others have experienced problems due to contaminants in the postconsumer fiber and reduced strength of the end product.

Federal agencies do not currently purchase MF uncoated groundwood papers. As with supercalendered papers, EPA believes that federal agencies could purchase MF papers in the future as an alternative to lightweight coated groundwood papers. Therefore, EPA believes that it is appropriate to recommend a content level for MF papers in the final Paper RMAN.

Commenters suggested a 10% postconsumer fiber level for MF papers, which is the level recommended for both supercalendered papers and lightweight coated groundwood papers. EPA agrees with this level and accepts the commenters statement that higher percentages of postconsumer fiber might adversely affect the cost, quality and strength of MF papers. Therefore, in the final Paper RMAN, EPA is adding MF papers and recommending that they contain 10% recovered fiber, all of which is postconsumer fiber.

j. Comment. EPA requested additional information about safety paper. EPA inquired whether and in what way state agency requirements for the paper used to print state checks differ from federal or commercial check specifications. EPA also requested information about the availability of safety paper containing recovered and postconsumer fiber that meets state agency requirements. No commenters provided information on state agency requirements for check paper.

Commenters stated that EPA should delete content recommendations for check safety paper. They stated that because of the presence of florescence and contaminants, it is extremely difficult for mills to source a consistent supply of suitable fiber.

Response. In the supporting analyses document for the draft Paper RMAN, EPA provided information about the availability of check paper containing postconsumer fiber. EPA noted that at least three manufacturers produce these paper containing 10% postconsumer fiber. EPA also discussed the fiber quality and performance restrictions on using higher levels of postconsumer fiber. While commenters noted the difficulties in sourcing recovered fiber, they did not demonstrate that manufacturers of safety paper were unable to obtain postconsumer or other recovered fiber. None of the manufacturers commented on EPA's draft content recommendation.

In light of this, EPA is retaining the 10% postconsumer

fiber recommendation for safety paper. Under the limitations specified in RCRA section 6002, procuring agencies are not required to purchase this product if it is not reasonably available, does not meet their reasonable performance standards, or is only available at an unreasonable price. EPA will reconsider this recommendation if it receives information demonstrating that it is no longer possible to obtain suitable supplies of fiber to manufacture safety paper, or that safety paper containing postconsumer fiber will not be price competitive due to fiber costs.

k. Comment. Commenters generally agreed with the 10% postconsumer content level for coated printing papers. One commenter urged EPA to recommend two-part content levels, using ranges. This commenter stated many coated sheets already contain recycled content higher than 10%.

Response. EPA acknowledges that there are coated papers available containing higher levels of postconsumer and other recovered fiber. However, as EPA explained in "Draft Paper Products RMAN -- Supporting Analyses," these are higher basis weight sheets that are available in very limited supply (see pages 54-55). All manufacturers using postconsumer or other recovered fiber to produce coated papers were experiencing a deterioration in the quality of fiber that affected their ability to maintain product quality.

The commenter did not submit any information indicating that the problems with the quality of recovered fiber supply had changed or that the supply of coated papers containing higher levels of postconsumer and other recovered fiber had increased. Therefore, EPA is maintaining the 10% postconsumer fiber recommendation for coated papers in the final RMAN.

l. Comment. Commenters generally agreed with the 20% postconsumer fiber recommendation for carbonless papers. One commenter suggested that EPA recommend a two-part content level, using ranges for each component. While generally stating that all printing and writing papers were available at higher content levels than recommended in the draft Paper RMAN, the commenter provided no information about the availability of carbonless meeting these higher content levels.

Response. Executive Order 12873 established the 20% postconsumer content level for carbonless paper. As explained in a. above, the Executive Order establishes a paradigm shift in the way procuring agencies should establish minimum content standards in order to encourage large printing and writing paper mills to use postconsumer fiber. Consistent with the Executive Order, EPA is retaining the 20% postconsumer content recommendation for carbonless papers in the final RMAN.

m. Comment. A commenter stated that all of the bristols listed in Table A-1c of the draft Paper RMAN should be lumped together as "bleached bristols." The commenter recommended that EPA recommend a content level range of 10 -

20% postconsumer fiber for bleached bristols. The commenter stated that a 50% recovered fiber content level for dyed filing products and tags and tickets seemed to favor smaller producers and did not encourage participation by larger, more fully integrated producers.

Response. As discussed in the supporting analyses for the draft Paper RMAN, EPA's research showed varying levels of postconsumer and recovered fiber usage in the products within the bleached bristols category. The commenter did not provide any information contradicting EPA's research or supporting the recommendation that bristols be combined in one category. Therefore, EPA is retaining the bristols listings in the final Paper RMAN.

EPA agrees that it generally is smaller mills, rather than integrated producers, that use 50% recovered fiber in bristol products. EPA took this into account in recommending a range of 20 - 50% for dyed filing products and tags and tickets in the draft Paper RMAN. Mills can use either 20% postconsumer fiber or 20% postconsumer fiber blended with additional amounts of recovered fiber and meet EPA's recommendations. The fact that mills can use 20% postconsumer fiber only should encourage participation by larger, integrated mills, just as it does with other types of printing and writing paper. For this reason, EPA is retaining its recommendation that dyed filing products and tags and tickets contain 20 - 50% recovered fiber, including 20% postconsumer fiber.

n. Comment. Commenters stated that the 20% postconsumer fiber content level for file folders was too high because any level higher than 10% recovered fiber will affect product quality.

Response. EPA stated in the supporting analyses to the draft Paper RMAN that there are technical difficulties in using high levels of postconsumer fiber in file folders. Fold, burst, and tensile strength can be affected by the substitution of postconsumer fiber for virgin softwood kraft fiber. EPA noted that these difficulties may result in limited availability of file folders containing 20% postconsumer fiber in the short-term.

In light of the comments, EPA contacted the U.S. General Services Administration (GSA) and the U.S. Government Printing Office (GPO) about their experience with file folders containing 20% postconsumer fiber. As required by Executive Order 12873, both agencies currently specify that file folders must contain 20% postconsumer fiber. GSA indicated that it has been able to purchase file folders meeting the 20% content requirement. GSA's Environmental Products Guide lists a variety of light-, medium-, and heavy duty file folders containing 20% postconsumer fiber. GSA noted that it experienced minor problems with the stiffness of one batch of file folders, but has not encountered any other performance problems with subsequent purchases. GPO did not provide EPA with information about the availability of or problems with file folders.

GSA's recent experience confirms that it is possible to

manufacture file folders containing 20% postconsumer fiber that meet procuring agencies' performance requirements. Therefore, EPA is retaining its 20% postconsumer fiber recommendation for file folders in the final RMAN.

o. Comment. A commenter stated that 1994 research for the State of Florida found that products containing the following content levels were available:

- Pressboard products 30% postconsumer
- Hanging files 10% postconsumer
- Red wallet grades 25% postconsumer
- Chipboard in binder covers 60% postconsumer

Response. The information provided does not allow EPA to determine whether these content levels can be met by a simple majority of mills. EPA's 1994 research indicates that products containing the levels recommended in the draft Paper RMAN were available, not just in a localized market, but from several mills in different geographical locations. Given the impact on bristols' performance when higher levels of postconsumer fiber are used, EPA believes that the levels in the draft RMAN are prudent and will maximize the use of postconsumer fiber in these products.

p. Comment. A commenter stated that the content level for index, postal, and other cards was too high. The commenter noted that large mills have the capacity to produce card stock in sufficient quantities to meet customer demand for large quantities, but they cannot use 50% recovered fiber. The smaller mills that can use 50% recovered fiber do not have the capacity to fill large-volume orders. Therefore, this commenter suggested that EPA recommend a 10% postconsumer content level for card stock.

Response. EPA contacted GPO and the U.S. Postal Service (USPS) regarding this comment. USPS purchases its postal cards through GPO. GPO uses the Joint Committee on Printing standards, which are 50% recovered fiber, including 20% postconsumer fiber, for index cards and 50% recovered fiber for postal cards. Both USPS and GPO stated that there has not been any difficulty procuring postal and index cards meeting these content levels. Thus, contrary to the comment, federal agencies have found that there is sufficient card stock meeting the recommended content levels to fill large volume orders. Based on this information, EPA is retaining the recommendation that cards contain 50% recovered fiber, including 20% postconsumer fiber.

q. Comment. A commenter stated that, due to exacting physical requirements, particularly dimensional stability, tabulating cards can contain a limited amount of recovered materials and no postconsumer fiber. Therefore, this commenter recommended that EPA exclude tabulating cards from the tags and tickets category.

Response. EPA requested information from GSA about its experience with tabulating cards containing 20% postconsumer fiber. GSA currently specifies that tabulating cards must

contain 20% postconsumer fiber. GSA indicated that it has been able to purchase tabulating cards meeting the 20% content requirement and that these cards perform well.

Based on GSA's experience, EPA concludes that it is possible to manufacture tabulating cards containing 20% postconsumer fiber that are able to meet procuring agencies' performance requirements. Therefore, EPA is retaining its 20% postconsumer fiber recommendation for tabulating cards in the final RMAN.

r. Comment. The commenter also stated that the use of up to 50% recovered fiber would seriously reduce the strength properties of tag grades. The commenter stated that only one manufacturer offers a tag product containing 50% recovered fiber, but this manufacturer has limited capacity and manufactures a very limited range of basis weights. The commenter further stated that it is unlikely that the General Services Administration's specifications for heavyweight tag (>150#) can be met with a tag sheet containing 20% postconsumer fiber.

Response. EPA requested information from GSA regarding tag grades. Historically, GSA has not encountered problems with the performance or availability of tag stock meeting a 50/20 standard. GSA recently researched its specification for 150# tag stock to determine whether the recovered fiber requirements should be revised. Contrary to the comment that there is only one manufacturer using 50% recovered fiber, GSA informed EPA that at least two manufacturers are able to produce a 150# tag stock using 50% recovered fiber, including 20% postconsumer fiber.

In the draft Paper RMAN, EPA recommended that tags and tickets contain 20 - 50% recovered fiber, including 20% postconsumer fiber. Based on the current performance and market data obtained from GSA, EPA is retaining this recommendation in the final Paper RMAN.VII. Recommendations for Newsprint

A. Background

In the draft Paper RMAN, EPA recommended that procuring agencies establish two- part content standards for newsprint. EPA recommended a recovered fiber content range of 40 - 100% and a postconsumer fiber content range of 40 - 85%. EPA noted in the supporting analyses document that these recommendations were a change from EPA's 1988 recommendation of 40% postconsumer materials. EPA also noted that many newsprint mills are not yet using 40% postconsumer fiber, but that at least 35 North American newsprint mills use some percentage of postconsumer or other recovered fiber. EPA further noted that there are two groups of mills manufacturing newsprint: those using 100% recovered fiber, including high percentages of postconsumer fiber, and those using wood-based pulp combined with lower percentages of postconsumer and recovered fiber. The draft ranges reflected this diversity. EPA acknowledged that it is not economically feasible at this time for mills that rely primarily on wood-based fiber to substitute high percentages of postconsumer and recovered fiber for their wood-based fiber.

Table A-2 contains the recommendations for newsprint from the draft Paper RMAN.

Table A-B. -- Recommended Recovered Fiber Content Levels for Newsprint

Item	Recovered Fiber (%)	Postconsumer Fiber (%)
Newsprint	40 - 100	40 - 85

B. Comments and Agency Response

a. Comment. Commenters objected to EPA's recommendations, stating that it is unnecessary to set such high levels because the supply of recycled content newsprint is small, the cost of adding additional recovered fiber would be prohibitive, and increased demand will drive up the demand and price for old newspapers. Further, a commenter stated that a 40% content level for newsprint will further drive up demand for ONP and consequently its price.

Response. EPA noted in the supporting analyses for the draft Paper RMAN that there was diversity between mills that use primarily recovered fiber and mills that use primarily wood-based fiber. EPA further noted that it might not be economical for the latter group of mills to increase their usage of recovered fiber. For this reason, EPA recommended ranges and noted that the low end of the range is appropriate for private sector purchasers.

In evaluating these comments, EPA researched current information about the postconsumer content of newsprint manufactured by 34 U.S. and Canadian mills. According to Pulp & Paper Week, about 40% of North American newsprint capacity is controlled by the top five producers: Abitibi-Price, Stone-Consolidated, Avenor, Kruger, and Bowater. EPA obtained content information from all but Abitibi and found that these producers use 20% or less postconsumer fiber in their newsprint. (One Avenor mill reported 35-45% postconsumer content, however.) Other major suppliers (Fletcher Challenge Canada, QUNO, Champion, and Smurfit) use varying amounts of postconsumer fiber. While Champion and Smurfit use 50% or more postconsumer fiber at 4 mills, Fletcher Challenge uses up to 10% postconsumer fiber at 1 mill and 10-40% at another mill. Information from QUNO was not available.

Based on this information, and consistent with EPA's acknowledgement that the private sector uses EPA's recommendations, EPA is revising the ranges in the final RMAN to 20 - 100% recovered fiber and 20 - 85% postconsumer fiber. EPA believes that government procuring agencies will continue to be able to purchase newsprint containing higher levels of both postconsumer and other recovered fiber. While some private sector purchasers also will be able to purchase newsprint containing high levels of both postconsumer and other recovered fiber, others will find

that newsprint containing lower levels of both postconsumer and other recovered fiber is available in the quantities needed.

One commenter documented that mills may not be able to manufacture newsprint containing 100% recovered fiber when fiber supplies are tight. Overall, no commenter stated that mills cannot meet the high end of EPA's ranges, however. Updated EPA research confirmed that four mills still manufacture newsprint containing 85% or more ONP, while a fifth mill can use up to 100% postconsumer fiber depending on customers' specifications. Therefore, EPA believes that the high end of the recommended content range represents current newsprint availability.

EPA agrees that private sector demand for higher postconsumer content newsprint could drive up demand for ONP and result in short-term shortages of ONP or short-term shortages of newsprint containing postconsumer fiber. In the longer term, however, EPA believes that the supply of recovered ONP/OMG will be sufficient to meet the demand from North American mills. Paper industry consultant Jaakko Poyry, Inc. reports that there will be only small incremental increases in ONP/OMG demand between now and the year 2000 and that a recovery rate of 55% will be sufficient to meet projected demand. The 1994 recovery rate for ONP/OMG was 45%.

EPA understands commenters' fear that purchasers will simply specify newsprint at the high end of EPA's recommended ranges without researching product cost or availability. EPA believes that it has provided adequate information in the background documents to educate procuring agencies and private sector purchasers about these issues. The fact sheets that will accompany the publication of the final Paper RMAN also will caution purchasers to research product availability before specifying minimum content standards. EPA believes that newsprint manufacturers can use this information to educate both public and private sector purchasers. EPA is willing to work with manufacturers to provide additional education to purchasers.

Finally, EPA notes that several states have mandatory or voluntary recycled content goals for newsprint purchased by newspaper publishers. Like government buy-recycled programs, the goal of these programs is to develop markets for the ONP collected in municipal solid waste programs. It is not EPA's intent, in revising the recommendations in the final Paper RMAN, to suggest that states revise the voluntary or mandatory content requirements for newspaper publishers. EPA encourages newspaper publishers to continue to purchase newsprint meeting or exceeding their states' goals.

b. Comment. A commenter stated that, because it is likely that over-issue newspapers and magazines were being counted toward "postconsumer" content, the recommended postconsumer levels should be re-examined.

Response. As part of the research described in the previous response, EPA provided its definition of

"postconsumer" to each mill contacted. Seven mills responded that they used 50% or more postconsumer fiber. Another five mills used up to 40% postconsumer fiber. Fourteen mills used 20% or less, and six mills used 30% or less. This information confirms the data EPA used to establish the draft content ranges.

c. Comment. Commenters stated that the key issue is collection of additional ONP, rather than increasing demand for newsprint containing postconsumer fiber.

Response. EPA agrees that collection can be increased and optimized to be more cost-effective. EPA is funding several initiatives to address collection and supply issues. EPA believes that there is still a need to maintain markets for ONP and other grades of recovered paper, however, considering the very cyclical nature of paper markets.

d. Comment. A commenter suggested that EPA recommend that purchasers use average recycled-content targets when purchasing newsprint. The commenter stated that this approach would permit the purchase of a wide range of recycled-content paper while achieving overall recycling goals. It also maximizes the number of mills with the potential to use recovered fiber.

Response. This approach is currently being used by several newspaper publishers to meet their states' mandatory or voluntary recycled content requirements. Under this approach, a target is set, such as 25% recycled content in a specified year. The newspaper publishers commit to meeting this target on average in their newsprint purchases for the year. Thus, a publisher might purchase newsprint containing 100% recycled content, 0% recycled content, or some percentage in between, as long as, on average, the recycled content was 25%.

EPA examined the use of this approach by newspaper publishers in the New England and mid-Atlantic states, which have mandatory and voluntary content agreements with the publishers. Some of the publishers contacted purchase newsprint from up to six mills at a time. All of them use a form of record-keeping to compute the average recycled content of the newsprint used.

EPA believes that the commenter is primarily concerned with providing flexibility to newspaper publishers, not to government agencies. Averaging is particularly appropriate for private sector purchasers that purchase and use newsprint on a continuous basis. By contrast, government agencies purchase in batch from one vendor.

EPA believes that RCRA provides procuring agencies with sufficient flexibility. Under RCRA, procuring agencies must establish the highest postconsumer fiber content standard practicable. EPA has stated that "practicable" refers to product performance, availability, price and competition. If an agency determines that paper meeting its content standard is no longer available, it can revise its standard and purchase paper at a lower level. EPA believes that another approach, as suggested by the commenter, is not

needed and notes that agencies have not expressed an interest in additional flexibility.

EPA found that the averaging approach is particularly useful when a purchaser, such as a publisher, buys newsprint on a continuous basis from several sources. Under this scenario, averaging can result in maximizing the use of postconsumer fiber in newsprint. EPA found that the newspaper publishers using the averaging approach maintain records or require their vendors to provide records, from which the average recycled content is calculated. None of the publishers contacted by EPA found the recordkeeping to be burdensome.

Based on this information, EPA is not recommending in the final Paper RMAN that procuring agencies use averaging as an alternative purchasing approach. EPA notes that private sector purchasers may find content averaging to be a useful alternative purchasing approach, however.VIII. Recommendations for Tissue Products

A. Background

In the draft Paper RMAN, EPA recommended two-part content levels for commercial/industrial (away-from-home) bathroom tissue, paper towels, paper napkins, and facial tissue. EPA also recommended two-part content levels for consumer (at home) bathroom tissue and paper towels and for industrial wipers. For the commercial/industrial tissue products, EPA recommended a 100% recovered fiber content, including ranges of postconsumer fiber. EPA recommended recovered fiber ranges up to 100% for consumer tissue products and industrial wipers.

The recommendations in the draft Paper RMAN apply to sanitary tissue products. EPA requested comment on specialty tissue products, including whether government agencies or their contractors purchase these products and whether postconsumer or other recovered fiber is used in the manufacture of these products.

Table A-3 contains the recommendations for sanitary tissue products from the draft Paper RMAN.

Table A-3. -- Recommended Recovered Fiber Content Levels for Tissue Products

Item	Recovered Fiber (%)	Postconsumer Fiber (%)
Bathroom tissue		
Commercial/industrial	100	25 - 60
Consumer	20 - 100	20 - 60
Paper towels		
Commercial/industrial	100	40 - 60
Consumer	40 - 60	20 - 60
Paper napkins		
Commercial/industrial	100	30 - 60

Facial tissue		
Commercial/industrial	100	30
Industrial wipers	40 - 100	40

B. Comments and Agency Response

a. Comment. EPA received no comments on specialty tissue products.

Response. The final Paper RMAN contains recommendations only for sanitary tissue products.

b. Comment. Commenters opposed the inclusion of recommendations for consumer bathroom tissue and paper towels. They stated that the use of postconsumer and recovered fiber in consumer tissue products is driven by customer demand and mill economics and does not need additional stimulus from EPA recommendations. Several of the commenters stated that customer surveys and product shelf tests indicated that consumers resist recycled content consumer tissue products. They also noted that government agencies do not purchase consumer tissue products and that, therefore, EPA had exceeded its authority by recommending content levels for these products.

Response. RCRA section 6002 directs EPA to provide guidance regarding the use of postconsumer materials in paper products. In addition, EPA has general authority under RCRA Section 8003 to provide information about the use of recovered materials in products. Therefore, EPA believes that it did not exceed its authority under RCRA by recommending content levels for consumer tissue products.

EPA's intent in recommending content levels for consumer tissue products was to provide information to consumers and general support to manufacturers producing tissue products with postconsumer and other recovered fiber. EPA policy has been to recommend content levels for paper products not purchased by government agencies if those recommendations would advance recycling and were supported by the product manufacturers. Because consumer tissue product manufacturers oppose EPA recommending content levels for their products, EPA is deleting these recommendations in the final Paper RMAN.

c. Comment. Commenters stated that EPA's data on commercial/industrial tissue products were incorrect. EPA's data indicated that most manufacturers produced tissue products containing 100% recovered fiber. For this reason, EPA recommended a 100% recovered fiber level for tissue products, rather than a range. The commenters stated that many of the tissue manufacturers produce one product line containing 100% recovered fiber, but this represents only a small fraction of their overall product lines. Thus, there are not sufficient tissue products containing 100% recovered fiber to ensure product availability and competition or to supply the broader, commercial (non-government) market. In addition, even if they wanted to re-formulate their product lines to contain 100% recovered fiber, they will not be able

to do so, because they currently are experiencing shortages and/or high prices for the grades of recovered paper used in tissue products. The commenters submitted new data to substantiate their comments.

Other commenters also questioned whether there would be adequate competition if the recovered fiber content level was 100% rather than a range.

Response. In the supporting analyses to the draft Paper RMAN, EPA stated that there is great variability in the postconsumer and recovered fiber usage among tissue producers. The commenters' data confirm this variability. In fact, commenters demonstrated that some tissue mills are integrated and use small percentages of postconsumer and recovered fiber combined with wood-based pulp, while others rely entirely on postconsumer and recovered fiber. EPA believes that commenters demonstrated that the Agency should recommend a range for the recovered fiber content of tissue products. Adding ranges will provide flexibility to all tissue mills when fiber supplies are tight and will allow more mills to compete, thereby encouraging greater usage of postconsumer fiber. As explained in the response to the next comment, EPA is setting the low end of the recovered fiber range for bathroom tissue, paper towels, and paper napkins at the level recommended in the 1988 paper procurement guideline.

d. Comment. Commenters proposed that EPA retain the 1988 postconsumer-only content recommendations in the final Paper RMAN, rather than two-part content recommendations. The commenters stated that there is an inadequate supply of recovered paper for tissue mills to meet the postconsumer fiber ranges recommended in the draft Paper RMAN. The commenters provided a fiber availability analysis showing that there is sufficient recovered paper for the mills to produce tissue products that meet the high end of EPA's recommended postconsumer ranges for Federal agencies, but the needs of other government and commercial purchasers of tissue products cannot be met at these levels.

The commenters stated that they compete with printing and writing mills and deinked market pulp mills for the same grades of recovered paper, but they are not able to pay as much for the paper. During the spring 1995 tight recovered paper markets, they were not able to obtain sufficient fiber. In addition, they stated that many of the tissue mills operate large machines using wood-based pulp. As with printing and writing paper, lower, postconsumer-only content levels will result in continued usage of postconsumer fiber at these mills.

Response. EPA continues to believe that the use of two-part content levels will result in greater usage of postconsumer materials by all tissue mills than will postconsumer-only levels because mills will use postconsumer fiber to meet both some of their total recovered fiber needs and their postconsumer fiber needs.

The comments indicate that the majority of mills can meet the 1988 recommended content levels for bathroom

tissue, paper towels, and paper napkins. While EPA lacks individual mill data to confirm the comments, the aggregate data submitted by the commenters and conversations with tissue manufacturers indicate that this is the case.

EPA requested additional information from the commenters regarding the postconsumer fiber content of facial tissue. EPA wanted to determine whether mills are using higher percentages of postconsumer fiber than the 5% level recommended in the 1988 paper procurement guideline. The tissue mills indicated that, while they prefer a 5% postconsumer fiber level to assure product quality, they can use 10-15% postconsumer fiber. A few mills are using as much as 30% postconsumer fiber, but this level either represents a single product line made for one customer or does not represent the content levels used by a simple majority of mills.

Based on the original comments and the additional information EPA has received about facial tissue, EPA is recommending the following levels for commercial/industrial tissue products in the final Paper RMAN:

- Bathroom tissue: 20-100% recovered fiber, including 20-60% postconsumer fiber,

- Paper towels: 40-100% recovered fiber, including 40-60% postconsumer fiber,

- Paper napkins: 30-100% recovered fiber, including 30-60% postconsumer fiber, and

- Facial tissue: 10-100% recovered fiber, including 10-15% postconsumer fiber.

e. Comment. A commenter stated that the low end of the postconsumer fiber range for tissue products should be 40%. The commenter stated that there was a broad range of tissue products now available with postconsumer content in excess of 40%. The commenter also stated that there should be a range of the recovered fiber content of bathroom tissue and paper towels, with the low end of the range set at 80%. The commenter did not provide documentation to support these content levels.

Response. As discussed in the previous response, the data submitted by the tissue manufacturers indicates that lower content levels will result in maximizing the use of postconsumer fiber in tissue products. While EPA is recommending a postconsumer fiber range beginning at 40% for paper towels, the data submitted by commenters indicates that lower levels of postconsumer fiber is used in paper napkins and bathroom tissue.

EPA agrees that there are some sanitary tissue products containing higher levels of postconsumer and other recovered fiber. However, the simple majority of mills are not using these higher percentages. For this reason, EPA is not recommending 40% or 80% as the low end of the ranges as suggested by the commenter.

f. Comment. Two commenters stated that industrial wipers should be divided into subgroups: (1) wiping towels or general purpose towels and (2) cloth-replacements or specialty wipers. They commented that wiping towels can contain recovered fiber but that the other wipers do not due either to performance requirements such as low lint or to the manufacturing technology used to produce them. One commenter recommended a content level of 0% for cloth replacements, while the other commenter recommended a content level of 0 - 100% recovered fiber, including 0 - 40% postconsumer fiber for the specialty category. This commenter indicated that no recovered fiber is used in its specialty wipers, however.

Response. The information submitted by commenters confirms that it is feasible for wiping towels to contain the postconsumer and recovered fiber percentages recommended by EPA in the draft Paper RMAN. The information submitted on the specialty or cloth- replacement wiper category indicates that neither manufacturer currently can use recovered fiber due to the performance requirements for the product and/or the manufacturing technology used. In the final Paper RMAN, EPA is revising the name of this item from industrial wipers to general purpose wiping towels, and retaining the content levels recommended in the draft Paper RMAN for this item.IX. Recommendations for Paperboard and Packaging Products

A. Background

In the draft Paper RMAN, EPA recommended that procuring agencies establish two- part content standards for paperboard and packaging products. EPA noted that, as with other paper products, there are diverse paperboard mills using very different percentages of postconsumer and other recovered fiber. As a result, EPA recommended ranges for most paperboard and packaging products. Specifically, EPA recommended ranges for the postconsumer fiber content of corrugated containers holding less than 300 pounds per square inch (<300 psi), folding cartons, industrial paperboard, miscellaneous paperboard items, padded mailers, and brown papers. EPA also recommended ranges for the recovered fiber content of corrugated containers holding less than 300 psi, miscellaneous paperboard products, padded mailers, carrierboard, and brown papers. EPA recommended specific postconsumer and recovered fiber content levels for corrugated containers holding 300 psi and for solid fiber boxes. EPA also recommended that products such as folding cartons, industrial paperboard, and miscellaneous paper products contain up to 100% recovered fiber.

Table A-4 contains the recommendations for paperboard and packaging from the draft Paper RMAN.Table A-4. -- Recommended Recovered Fiber Content Levels for

Paperboard and Packaging Products

Item	Recovered Fiber (%)	Postconsumer Fiber (%)
Corrugated containers* (þ300 psi)	40 - 50	40 - 50

(300 psi)	30	30
Solid Fiber Boxes	40	40
Folding cartons**	100	40 - 80
Industrial paperboard (e.g., tubes, cores, drums, and cans)	100	45 - 100
Miscellaneous (e.g., pad backs, covered binders, book covers, mailing tubes, protective packaging)	90 - 100	75 - 100
Padded mailers	5 - 15	5 - 15
Carrierboard	25 - 100	15
Brown papers (e.g., wrapping paper and bags)	5 - 40	5 - 20

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* The recovered fiber and postconsumer fiber content is calculated from the content of each component relative to the weight each contributes to the total weight of the box.

** The recommended content ranges are not applicable to all types of paperboard used in folding cartons. Cartons made from solid bleached sulfate or solid unbleached sulfate contain no or small percentages of postconsumer fiber, depending on the paperboard source.B. Comments and Agency Response

a. Comment. Commenters stated that the specific percentages for all products in the paperboard and packaging category are too high, given the current and expected conditions in the recovered fiber supply market. The commenters stated that the proposed content levels would lead to greater pressure on supply and higher prices for recovered paper, which would cause some manufacturers to switch to virgin fiber.

Response. The commenters did not provide EPA with any substantive information on which to base lower content recommendations.

b. Comment. EPA requested comment regarding the fiber used in the manufacture of corrugated containers, including (1) the content level in corrugated containers rated at 300 psi or greater, (2) the impact of the recent increased demand for OCC on the ability of manufacturers to meet the recommended content levels for corrugated containers, and (3) whether the imminent availability of additional capacity to make linerboard containing 100% recovered fiber would allow manufacturers to exceed the high end of the ranges of recommended content levels for corrugated containers.

(1) A commenter stated that corrugated containers rated at 300 psi or greater could contain more than 30% postconsumer fiber. However, less than 5% of all linerboard was made in the basis weights needed for these boxes.

Another commenter stated that less than 10% or the industry could use high amounts of postconsumer fiber and still maintain the required burst strength performance characteristics.

(2) A commenter provided data indicating that almost all U.S. containerboard mills use 100% recovered fiber or a mix of recovered and wood-based fiber. Several commenters stated that there is insufficient OCC available for every corrugated container manufactured in the U.S. to meet a 40% recovered fiber content. These commenters stated that, with four million additional tons of containerboard capacity coming on line by 1997, there will continue to be shortages of OCC. As the demand increases, the price of OCC will increase and reach a point at which mills will switch to wood-based fiber in order to control product costs. Such an outcome is contrary to EPA's objectives. One of the commenters added that not all corrugated containers will meet EPA's recommendations (i.e., some will contain lower levels of postconsumer fiber).

(3) Several commenters noted that there already are several mills manufacturing linerboard containing high levels of postconsumer and other recovered fiber. One commenter stated that 70% of U.S. mills producing corrugating medium use approximately 30% postconsumer fiber. Using this lower figure to calculate the content of a container results in a total postconsumer fiber content of 23%. Therefore, the commenter suggested that EPA recommend a 25% content for corrugated containers. The commenter added that a lower content level would help make postconsumer fiber available to all mills who want to meet EPA's recommendations.

(4) Several other commenters also disagreed with the recommended content levels for corrugated containers. Commenters expressed a variety of concerns, most of which originate in the high prices and shortages of OCC that existed in the spring of 1995. Commenters stated that the content levels are impossible to reach industry-wide because of the OCC shortages. Several commenters also stated that the content levels are impractical, jeopardize quality, increase costs, promote inefficient use of raw materials, and encourage imports of recycled content containers. None of these commenters documented these statements or suggested an alternative content level.

(5) A commenter questioned bursting strength as a criterion for differentiation between types of corrugated containers.

(6) A commenter recommended a content level of 40% recovered fiber, including 35% postconsumer fiber, for corrugated containers. This commenter noted, however, that there should be some flexibility because of the OCC supply shortages.

Response. The information provided by the commenters confirms that it is feasible for corrugated containers to contain the range of postconsumer and recovered fiber content levels recommended by EPA in the draft Paper RMAN.

EPA also agrees that not every container will meet the recommended levels, and some containers will exceed them. It is not EPA's intent that every container meet the recommendations, however. Rather, it is EPA's intent to provide guidance to procuring agencies regarding the postconsumer and recovered fiber content of products available to them.

EPA agrees with commenters that containerboard mills have achieved a high recovery and utilization rate for OCC and other recovered fiber. EPA further agrees that there is no need to foster markets for OCC among containerboard producers. That does not mean, however, that government agencies should stop meeting the RCRA section 6002 requirement to specify corrugated containers containing postconsumer materials. Nor does it mean that EPA should no longer meet its RCRA section 6002 responsibilities to provide guidance to government agencies regarding the postconsumer content of paper products. It simply means that if, at some point, EPA's recommendations are no longer viable, then EPA will adjust them from time to time to reflect the current postconsumer and recovered fiber content of containers.

Based on the comments regarding the content of corrugating medium, EPA will retain 50% as the high end of the recovered and postconsumer fiber ranges for corrugated containers. EPA is revising the low end of both the recovered fiber and postconsumer fiber ranges to 25%. EPA concludes that more mills will be able to meet a 25% content level than a 40% level. As a result, the revised recommended ranges for corrugated containers (<300 psi) is 25-50% recovered fiber, including 25-50% postconsumer fiber. For heavier strength corrugated containers, EPA is recommending a range of 25-30% recovered fiber, including 25-30% postconsumer fiber.

As indicated above, EPA is recommending lower content levels for heavier strength corrugated containers than for other corrugated containers. EPA distinguished between containers based on their strength because GSA uses separate specifications for heavier strength containers, and EPA found that heavier strength containers contain a lower percentage of postconsumer fiber than other corrugated containers. By differentiating between corrugated containers based on bursting strength, EPA is simply making it for easier for agencies such as GSA to use EPA's guidance.

c. Comment. EPA requested comment regarding differences in the postconsumer fiber content currently used in coated and uncoated folding cartons. EPA also requested comment regarding whether recommendations for coated and uncoated folding cartons should be listed separately because of the differences in their ability to incorporate postconsumer fiber content. A commenter stated that performance factors, rather than the presence of coatings, determine the use of postconsumer fiber in folding cartons. Therefore, the same content recommendations can be made for coated and uncoated cartons.

Response. Based on this information, EPA will retain the approach of not distinguishing between coated and uncoated cartons in its recommendations in the final Paper RMAN.

d. Comment. EPA requested comment regarding the affect of increased demand for OCC on the availability of folding cartons containing higher percentages of postconsumer fiber.

A commenter generally addressed the impact of the OCC shortages, stating that shortages could affect the postconsumer content level used in folding cartons. The comment did not provide specific information about current postconsumer fiber usage in the manufacture of folding cartons.

Response. The commenter did not demonstrate that the ranges recommended in the draft Paper RMAN are incorrect or inconsistent with EPA's methodology. Further, the commenter provided no documentation that EPA's ranges should be revised. Therefore, EPA did not revise the recommendations for folding cartons in the final Paper RMAN.

e. Comment. EPA requested comment on whether there should be different content level recommendations for the various industrial paperboard products, based on the specific application(s) for those products. EPA also requested comment on whether there should be different postconsumer ranges for coated and uncoated miscellaneous paperboard products, and different content recommendations based on the specific application(s) of the miscellaneous products.

A commenter stated that EPA should not attempt to recommend different content levels for industrial paperboard products because there are hundreds of different products, the vast majority of which are already made with 100% recycled paperboard. The commenter also stated that EPA should not recommend different ranges for miscellaneous paperboard products, whether based on coating or product application. The commenter further stated that separate content levels for each product will not increase recycling.

Response. In the draft Paper RMAN, EPA recommended content levels for "industrial paperboard" and for "miscellaneous" products, without distinguishing between products in these two categories. Based on the information submitted, EPA will retain this approach in the recommendations in the final Paper RMAN.

f. Comment. EPA requested comment regarding whether percentages of postconsumer fiber greater than 15% are used in padded mailers. EPA also requested comment on the percentages of recovered fiber other than postconsumer fiber used in padded mailers. EPA received no comments on padded mailers.

Response. Because EPA received no information contrary to the content levels recommended in the draft Paper RMAN, EPA will not revise the recommendations for padded mailers in the final Paper RMAN.

g. Comment. EPA requested comment on whether there are different performance characteristics for the two different types of carrierboard (unbleached kraft and recycled paperboard) that would require listing them separately in the final RMAN. A commenter stated that, because carrierboards made from both unbleached kraft and recycled paperboard compete successfully in the marketplace, there is no need to distinguish between them based on performance characteristics. The commenter also stated that the ranges recommended in the draft Paper RMAN seem to account for the performance of the products.

Another commenter suggested that EPA list carrierboard made from 100% recycled paperboard separately from unbleached kraft carrierboard. The commenter stated that, because the 100% recycled paperboard product represented only 2% of the market, it would be misleading to consumers to recommend a range up to 100%. While the commenter did not discuss what would be misleading, EPA assumes that the commenter referred to misleading information about the availability of the product made with 100% recycled paperboard.

In a subsequent meeting and telephone calls with EPA, one of the unbleached kraft carrierboard manufacturers suggested that EPA define carrierboard in terms of tear strength as determined by Technical Association of the Pulp & Paper Industry (TAPPI) test method T414. The manufacturer expressed concern that, because EPA recommended a recovered fiber range of 25-100% for carrierboard, purchasers would specify higher recovered fiber content levels than the unbleached kraft carrierboard products can contain.

Response. EPA believes that the recovered fiber range recommended for carrierboard (25-100) informs purchasers that there is diversity among carrierboard manufacturers. No purchasers commented that it is confusing to combine carrierboard made from recycled paperboard with carrierboard made from unbleached kraft. EPA concludes that any distinctions between the types of carrierboard is a marketing issue, not a postconsumer fiber issue. Therefore, EPA does not believe that it is appropriate to separate the recommendations for the two types of carrierboard in the final Paper RMAN.

However, EPA understands the manufacturers' concerns that purchasers will specify higher percentages of recovered fiber than unbleached kraft carrierboard currently can contain. Therefore, EPA is adding the following footnote to the carrierboard recommendations in the final Paper RMAN: Carrierboard made from unbleached kraft contains up to 25% recovered fiber, while carrierboard made from recycled paperboard contains up to 100% recovered fiber.

h. Comment. The two manufacturers of unbleached kraft carrierboard recommended that EPA reduce the content recommendations for this product. They commented that, due to the shortages of OCC that they were then experiencing, the postconsumer fiber content of their products was lower than the 15% level recommended in the draft Paper RMAN. One

manufacturer recommended a content level of 10 - 100% recovered fiber, including 10% postconsumer fiber. The other manufacturer recommended a range of 15 - 25% recovered fiber, including 10 - 15% postconsumer fiber. The principle concern of both manufacturers was the impact of OCC shortages on their ability to use higher levels of postconsumer and other recovered fiber.

Response. In the final Paper RMAN, EPA is revising the carrierboard ranges to reflect this new data from the product manufacturers. The range will be 10-100% recovered fiber, including 10-15% postconsumer fiber. When OCC supplies are adequate, the manufacturers should be able to provide carrierboard containing greater percentages of postconsumer fiber.

i. Comment. Commenters objected to the content recommendations for brown papers, which include wrapping paper and bags. A commenter requested that EPA not recommend any content levels because they would exaggerate the problems associated with the current demand/supply imbalance in recovered paper grades. Several commenters expressed concern that certain performance categories (e.g., multiwall kraft paper, produce packaging, and source-reduced performance packaging) would fail to meet the standards necessary to perform their intended functions if they contained 40% recovered fiber. One of these commenters stated that because of their different performance requirements, all grades should not be lumped together as "brown papers" with the same recovered content level target. This commenter did not recommend an alternative, however. Another commenter recommended a 10% postconsumer fiber content level, rather than the 5 - 20% range recommended by EPA.

Response. In the supporting analyses for the draft Paper RMAN, EPA stated that (1) GSA was able to purchase sacks containing 5% postconsumer fiber, (2) some manufacturers are producing bags containing more than 5% postconsumer fiber, and (3) at least one manufacturers of grocery sacks was using up to 20% ONP. EPA further stated that some manufacturers of unbleached packaging will use only low levels of recovered fiber, all of which is postconsumer fiber. The comments confirm EPA's analysis.

EPA agrees with commenters that in some brown papers, particularly those with special performance requirements, only low levels of postconsumer fiber can be used. Therefore, it is appropriate to recommend content levels as low as 5%. As GSA has done, procuring agencies should use the low end of EPA's recommended range for products with special requirements, such as tensile strength or air permeance.

The fact that some brown papers can contain only small percentages of postconsumer and other recovered fiber does not mean that the content of all brown papers should be limited to the lower percentages. The comments confirm that "brown papers" or "unbleached packaging" include a variety of items with differing performance requirements necessitating differing levels of postconsumer and other

recovered fiber. EPA concludes from the comments that it is beneficial to recommend ranges for both the recovered fiber and postconsumer fiber components of brown papers because of their differing performance requirements. Commenters did not demonstrate any reason for limiting the recommended content level to 5% or 10%. It is manufacturers' responsibility to educate procuring agencies about the affect of these performance constraints on the level of postconsumer and other recovered fiber that can be used in these products.

Further, while EPA agrees with the commenter that "brown papers" includes papers used for a variety of applications, in the absence of a suggested alternative, EPA believes that it is appropriate to combine brown papers in one line item in the RMAN.

j. Comment. EPA requested information about the use of postconsumer or other recovered fiber in solid bleached sulfate (SBS) products, government procurement of products made from SBS paperboard, and whether EPA should recommend content levels for SBS paperboard products.

Several commenters confirmed that low levels of recovered fiber are being used by a few bleached paperboard producers. The commenters stated that less than 10% of SBS paperboard production contains postconsumer or other recovered fiber. Because SBS is used in food-grade packaging for fatty and aqueous products, it is difficult to use postconsumer fiber and satisfy Food and Drug Administration requirements for these products. Both the recycled paperboard and the SBS paperboard manufacturers commented that EPA should not recommend content levels for SBS because of the limited usage of postconsumer fiber in this paperboard at this time. No commenters provided information about government procurement of SBS paperboard products.

Response. EPA stated in the supporting analyses to the draft Paper RMAN that it was not recommending content levels for SBS because there are limited sources and availability of SBS containing postconsumer fiber. The information provided by the commenters confirms EPA's findings. Therefore, EPA is not adding recommendations for SBS paperboard to the final RMAN.

k. Comment. According to another commenter, EPA should recommend that agencies prefer products made from recycled paperboard because products made from SBS and unbleached kraft paperboard contain little or no recovered fiber.

Response. EPA agrees that, all other factors being equal, agencies should purchase products made from recycled paperboard. However RCRA section 6002 directs agencies to purchase paper products containing the highest levels of postconsumer material practicable, considering performance, price, availability, and competition. Because there may be reasons other than postconsumer content for an agency to choose a particular product, EPA will not recommend that agencies always prefer products made from recycled paperboard over products made from SBS or unbleached kraft.

l. Comment. Commenters noted an error in footnote 2 on page 14185 of the March 15, 1995 Federal Register notice. EPA stated "while it is technically possible to produce a food-grade product with recovered and/or postconsumer fiber, the material must be carefully selected. Limited availability of suitable material precludes wide-spread use of recovered of postconsumer fiber in food-grade paper products." Commenters noted that EPA's statement is misleading because products such as recycled paperboard have been used to package cereal and other dry foods for decades, in compliance with the applicable Food and Drug Administration regulations. A commenter further noted that EPA should not address the use of recovered fiber in food-grade packaging because such use is a marketplace decision.

Response. EPA agrees that the information in the footnote is misleading. EPA intended to provide information on the differences between the recovered fiber content of packaging used for dry foods and packaging used for fatty and aqueous foods. In particular, EPA meant to address the limited usage of postconsumer and other recovered fiber in SBS paperboard. As the commenters noted, recycled paperboard is being used to package many types of dry foods, such as cereals and pasta. Recycled paperboard that is lined with foils or plastics also is used for oily foods.

As discussed in the previous comment, EPA agrees that it should not recommend content levels for SBS paperboard at this time. EPA believes that it is appropriate to discuss food-grade packaging either in the preamble to a RMAN or in this response-to-comments document, however. The role of these documents is to provide guidance to procuring agencies regarding the use of postconsumer and recovered materials in paper and paper products. EPA's guidance has also been used by private sector purchasers. EPA is providing information about the differences between the postconsumer and recovered fiber content of recycled paperboard, SBS, and unbleached kraft paperboard as guidance for all purchasers interested in purchasing products made from these types of paperboard.X. Recommendations for Miscellaneous Paper Products

A. Background

In the 1988 paper procurement guideline, EPA included "doilies" with tissue products. "Doilies" referred to place mats used to line food trays, rather than to the die-cut doilies used as decorative food service liners. In the supporting analyses to the draft Paper RMAN, EPA explained that these food tray liners are manufactured from printing and writing papers, rather than from tissue papers. Therefore, EPA removed "doilies" from the tissue category and listed "tray liners" in a new Miscellaneous Paper Products category. EPA recommended a content level of 100% recovered fiber, including 75% postconsumer fiber.

B. Comments and Agency Response

a. Comment. EPA requested comments on the availability of tray liners containing percentages of recovered fiber,

including postconsumer fiber, other than 100% recovered fiber, including 75% postconsumer fiber. One commenter stated that they offer a product meeting these levels but that, if over-issue publications cannot be counted as postconsumer paper, then they can certify the product as containing only 50% postconsumer fiber. (Definitions are discussed in section XIV of this document.) The commenter stated that its product is made entirely from deinked newspapers and magazines and that the source of most of the magazines is newsstand returns.

Response. Based on this information, EPA is recommending a range of 50 - 75% postconsumer fiber for tray liners in the final Paper RMAN. The recommendation for 100% recovered fiber content is unchanged.

b. Comment. EPA noted in the supporting analyses to the draft Paper RMAN that GSA has expressed concern that the user of postconsumer fiber in tray liners could violate the FDA restrictions on migration of contaminants into food. EPA requested comment on this issue. One commenter stated that tray liners can be made with recovered and/or postconsumer fiber without posing any meaningful risk to human health or safety.XI. Recommendations for Measurement

A. Background

In the draft Paper RMAN, EPA's recommended content ranges are expressed as a percentage of the weight of the fiber used in the paper or paper product. EPA recommended that procuring agencies use the "fiber weight" measurement method when establishing their minimum content standards. In the supporting analyses document, EPA discussed the rationale for using this method, rather than calculating recovered materials content as a percentage of the "total weight" of the sheet. EPA explained that fiber is the predominant ingredient in paper and currently is the primary recovered resource of high economic value. The fiber weight method recognizes that paper and paper products contain other materials, such as fillers, coatings, and dyes, in addition to fiber but that commercial recovery of these other components currently is not viable in the U.S. The fiber weight method is used by both GSA and GPO as well as by many states.

The draft Paper RMAN also addressed whether the recovered fiber component of mill broke could be counted toward the recovered fiber content of paper or a paper product. EPA stated that broke generated in a process that uses postconsumer or recovered fiber as feedstock can be counted toward "postconsumer fiber" or "recovered fiber" content, to the extent that the feedstock contains materials which would qualify as postconsumer or recovered fiber.

B. Comments and Agency Response

a. Comment. All commenters who addressed measurement supported the use of the fiber weight method of calculating postconsumer and recovered fiber content. Two commenters noted that some fillers are not fully removed in the repulping and cleaning process and may be carried with the

fiber into the new sheet. One of these commenters suggested that EPA add a qualifier to its measurement recommendations explaining that nonfiber materials can be retained in the fiber furnish as integral components and can be counted toward the fiber weight of the product.

Response. EPA agrees with the commenters that recycled fiber can contain incidental amounts of fillers or dyes that are not fully removed in the cleaning process. Because these materials are recycled into the new paper or paperboard along with the fiber, EPA believes that they should be counted as part of the fiber weight of the sheet. However, EPA is not adding a qualifier to the measurement recommendations in the final Paper RMAN because the Agency has concluded that it contains a level of technical detail that could be confusing to most paper purchasers.

b. Comment. Most commenters supported EPA's recommendation that procuring agencies permit mills to count the postconsumer and recovered fiber portion of mill broke when certifying the recovered fiber content in products offered to the agencies. A commenter opposed this recommendation, stating that it would not help improve markets for recycled paper and would greatly complicate the verification and tracking process for postconsumer content claims. Another commenter stated this calculation would be difficult for mills that use both virgin and recovered feedstocks and would create additional recordkeeping requirements, increase costs, and invite dishonesty.

Response. EPA disagrees. If the postconsumer and recovered fiber portion of broke is not counted, no mill will be able to certify that its products contain 100% recovered fiber, even a mill that relies solely on recovered paper as its fiber source. Further, EPA notes that no paper industry commenters, whether 100% recycled mills or mills that use both wood pulp and recovered fiber, opposed the recommendation or stated that it would impose a financial or recordkeeping burden on them. Rather, they recognized that the recommendation is intended to provide mills that use postconsumer and other recovered fiber with the opportunity to count a portion of their broke as postconsumer or recovered fiber. It acknowledges that these mills have helped to improve markets by their use of postconsumer and other recovered fiber and that a portion of that fiber -- which contains recovered materials -- is returned to the manufacturing process in the form of broke.XII. Recommendations for Specifications

A. Background

In the 1988 paper procurement guideline, EPA recommended that procuring agencies review their specifications provisions pertaining to performance and aesthetics and revise provisions that can impede the use of postconsumer and recovered fiber. EPA repeated these recommendations in the draft Paper RMAN.

B. Comments and Agency Response

a. Comment. A commenter suggested that EPA streamline the specification process to eliminate redundant and

duplicative specifications issued by the U.S. General Services Administration and the U.S. Government Printing Office.

Response. These two agencies and the Congressional Joint Committee on Printing are responsible for most of the Federal paper and paper product specifications. While EPA can recommend that these agencies address specification provisions related to the use of postconsumer and other recovered fiber, it has no authority to address the process used by these agencies to develop their specifications, nor any redundancies that may exist in their specifications.

b. Comment. A commenter stated that the draft Paper RMAN does not pay adequate attention to the benefits of source reduction for paper products. The commenter requested that EPA recommend that agencies consider source reduction in their procurement decisions.

Response. The commenter is correct that waste prevention (i.e., source reduction) is a high priority in EPA's waste management hierarchy. However, the Paper RMAN is issued under authority of RCRA section 6002, which specifically directs EPA to address procurement of paper products that maximizes the postconsumer materials content of those products. For this reason, the recommendations in the final Paper RMAN are limited to the postconsumer and recovered fiber content of paper products and related issues.XIII. Recommendations for Recyclability

A. Background

In the draft Paper RMAN, EPA recommended that agencies consider the effect of a paper purchase on their paper collection programs by assessing the impact of their decision on their overall contribution to the solid waste stream. EPA explained in the supporting analyses document that accompanied the draft Paper RMAN that some paper products containing postconsumer or other recovered fiber may have a wider variety of potential markets and, therefore, may be easier to recycle than others. Other characteristics might make a paper product more recyclable or generate less material because the product is source reduced.

B. Comments and Agency Response

a. Comment. Commenters noted that contaminants such as glues, adhesives, coatings, food residue, and certain dyes also can affect the recyclability of paper and paper products.

Response. EPA agrees with commenters that there are a variety of contaminants that can affect the recyclability of paper and paper products. Some of these contaminants are added to the paper prior to collection for recycling (e.g., food residues, adhesives, coatings, glues). Others may be added during collection, particularly as a result of commingling of recyclables. Other contaminants are the direct result of a purchasing decision (e.g., dyes).

Because EPA's Paper RMAN is for the use of purchasers, EPA is limiting its recyclability recommendations to those characteristics that are a result of purchasing decisions. EPA's RMAN is not the appropriate forum for developing specifications for collecting recovered paper. Rather, EPA has and will continue to work with the paper industry and other public and private partners to provide education about contamination issues.

b. Comment. A commenter stated its belief that the recyclability recommendation was aimed at one of its products and suggested that EPA revise its recommendation to address the trade-off between the pricing and high postconsumer fiber content of this product and the impact of this product on recycling revenues.

Response. It was not EPA's intent to single out any particular product in the recyclability recommendation. In fact, EPA did not mention any particular product attribute or contaminant in the actual recommendation in the draft Paper RMAN. In the supporting analyses to the draft Paper RMAN, however, EPA identified several attributes that could affect recyclability, including dyes, coatings, and groundwood content. These are all attributes that can be controlled through purchasing decisions if an agency determines that the attributes will impact the agency's contribution to solid waste generation. It was EPA's intent to alert procuring agencies that purchasing decisions can impact their collection programs and that they should be prepared before they make a purchase to alter their collection programs, if necessary, to accommodate the attribute. As commenters correctly pointed out, markets exist for all types of paper products; agencies simply may be required to change the markets they supply as a result of a purchasing decision.

EPA believes that it is not appropriate to single out a particular product or attribute in making its recyclability recommendations. For this reason, EPA will not revise its recommendation to address the purchasing and recycling trade-offs associated with a specific product.

c. Comment. A commenter stated that, in addressing recyclability, EPA should not require that agencies use closed-loop recycling (i.e., using recovered printing and writing paper solely in the manufacture of new printing and writing paper.)

Response. EPA believes that commenters are reading into the recyclability recommendation more than was intended. EPA did not discuss closed-loop recycling either in the draft Paper RMAN or in the supporting analyses document. As noted in the response to the previous comments, EPA's recommendations in the final Paper RMAN do not address the specifics of paper collection, nor does the Agency attempt to direct fiber to particular uses. EPA has not recommended in the Paper RMAN or any other document that particular grades of recovered paper be directed to particular uses.XIV. Definitions

A. Background

In the draft Paper RMAN, EPA used the RCRA section 6002(h) definition of "postconsumer recovered materials" as the definition of "postconsumer fiber." EPA used this definition starting with the 1988 paper procurement guideline. EPA stated in the draft RMAN that the definition excludes "fiber derived from printers' over-runs, converters' scrap, and over-issue publications," which is an interpretation EPA has been providing in response to inquiries since 1988.

In addition, EPA proposed new definitions of "recovered fiber" and "mill broke" in the draft Paper RMAN. "Recovered fiber" identifies materials that can be counted toward the total recycled content of paper or paperboard, while "mill broke" identifies materials that cannot be counted either toward the total recycled content or the postconsumer content.

The proposed definitions were based on the "waste paper" and "mill broke" definitions used in the 1988 paper procurement guideline. EPA proposed three changes from the 1988 definitions. First, certain mill-generated materials were moved from "waste paper" to "mill broke:" offgrade or off-specification rolls, converting scrap, culls, stub rolls, side rolls, end rolls, and obsolete inventories. In other words, these materials could no longer be counted toward total recovered fiber content. EPA stated that these materials are commonly re-pulped, sold to others for pulping, or otherwise used in or converted to paper products. Allowing these materials to count toward recovered fiber content does not provide an incentive for mills to use materials recovered from solid waste and, therefore, does not meet the RCRA objective of increasing markets for postconsumer materials.

Second, EPA specified that materials must be re-pulped. As a result, a person cannot purchase an off-specification or obsolete roll, convert it into cut sheets or note pads, and sell it as paper containing "recovered materials" or paper "meeting EPA's guidelines."

Third, EPA corrected an error in the 1988 definition of "waste paper" by deleting the words "forest residues" from the phrase introducing the non-postconsumer materials that count as "recovered fiber."

B. Comments and Agency Response

a. Comment. Several commenters stated that the postconsumer definition should be broader. Most of these commenters stated that over-issue publications are postconsumer materials. Some of the commenters also stated that printers' over-runs should be included in the postconsumer definition. The commenters stated that the source of recovered paper is irrelevant to the pulp and papermaking processes because printed materials must be handled and pulped in the same way, regardless of source. The commenters also stated that it is not always possible to determine the origin of a bale or truckload of recovered paper and that there is no scientific means of testing paper to determine whether or not it is from a postconsumer

source. They further stated that the use of the narrower definition adds to the costs of manufacturing recycled paper because it is more costly to track postconsumer. One commenter also stated that the postconsumer definition used in the draft Paper RMAN violates RCRA because it is contrary to the "recovered materials" definition found in the statute.

Response. As EPA explained in the draft Paper RMAN, Congress defined "postconsumer recovered materials" in RCRA section 6002(h)(1). It is the first subset of the definition of "recovered materials" that Congress directs agencies to use when purchasing paper and paper products. Thus, EPA's use of the postconsumer definition is consistent with the RCRA definition.

Commenters repeated past arguments without providing new information to justify expanding the postconsumer definition. EPA continues to believe that its interpretation of RCRA section 6002 is reasonable.

RCRA section 6002(h) specifically includes converting scrap in the "other" recovered materials subset, not in the "postconsumer" subset. RCRA section 6002(h)(1) suggests two clear benchmarks for determining whether over-issue publications and printers' over-runs are postconsumer materials. First, postconsumer paper includes paper that has passed through its end-usage as a consumer item. This includes conventional discarded paper (e.g., old newspapers and magazines) from retail stores, homes, and office buildings. Second, postconsumer paper also includes paper recovered from municipal solid waste. Thus, the statute would seem to limit postconsumer recovered newspapers and magazines either to newspapers and magazines collected from the consumer before they enter the municipal solid waste stream as well as that recovered from the municipal solid waste stream after collection. Over-issue publications and printers' over-runs which never reach a consumer do not meet either of these criteria.

RCRA section 6002 does not define postconsumer paper on the basis of whether the paper could enter the municipal waste stream. Rather, the examples in the statute appear to make a distinction between recovered materials and postconsumer recovered materials based on whether the paper is received by an ultimate consumer for which it was intended. Thus, for example, paper, paperboard and fibrous materials may be postconsumer paper after passing through their intended end uses. If, however, that same paper, paperboard or fibrous material never reaches a consumer, it remains a preconsumer recovered material.

In addition, a reading of the types of materials listed in section 6002(h)(1) suggests that over-issue publications and over-runs are not postconsumer materials. Among the examples of postconsumer paper given in the statute are "old newspapers." Because publishers' over-runs are clearly not "old" magazines and newspapers, they are not a postconsumer material. Moreover, while section 6002(h) does not specifically list printers' over-runs and over-issue publications as either "postconsumer materials" or other

recovered materials, it does provide that "finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or other" are not postconsumer materials. Thus, over-issue publications and printers' over- runs are specifically listed as preconsumer recovered materials.

b. Comment. Commenters agreed that materials must be re-pulped and that forest residues should not be included as "recovered fiber." A commenter suggested that EPA specify that "direct entry" processes are included as repulping technologies because these processes also reduce recovered paper to a fiber slurry.

Response. EPA is retaining these provisions in the "recovered fiber" definition in the final Paper RMAN. EPA agrees that direct entry processes qualify as repulping for purposes of the RMAN.

See Exhibit 1 for the "postconsumer fiber" definition included in the final Paper RMAN.

c. Comment. While some agreed with the "recovered fiber" and "mill broke" definitions, most commenters opposed the narrowing of the "recovered fiber" definition and the related expansion of the "mill broke" definition. Commenters pointed out that some of the materials that EPA proposed to move into the "mill broke" definition are listed in the RCRA section 6002 definition of "recovered materials." Therefore, the commenters stated that it is contrary to RCRA to include these materials in the definition of "mill broke." Commenters also stated that all of the industry data previously provided to EPA was based on the 1988 definitions and, therefore, would be incorrect. Further, commenters stated that the excluded materials generally are easier to use because they are homogenous, clean, and without printing, whereas postconsumer materials are heterogenous, sometimes contaminated with food residue and other contaminants, and contain printing. For this reason, mills would not substitute postconsumer materials for the excluded materials. Finally, commenters stated that the paper industry based its investments and strategies for manufacturing recycled paper on the 1988 definitions. The industry has invested billions of dollars in recycling, and there is no reason to change course now when the definitions have been working to increase domestic recycling capacity.

Response. In light of the comments, EPA has reconsidered the proposed definitions and has concluded that they are inconsistent with RCRA section 6002(h). EPA also has concluded that industry is correct when it suggests that retaining the proposed definitions would require the Agency to conduct new research into the recovered fiber content of products. Further, EPA believes that, because the materials in question represent a small percentage of all materials recovered and used, the proposed definitions would not make a significant contribution to expanding the use of postconsumer materials. For these reasons, EPA is using the 1988 definition of "mill broke" in the final Paper RMAN. EPA also is using the 1988 definition of "waste paper" as

the definition of "recovered fiber," adding that the material must be re-pulped and excluding the words "forest residues."XV. Certification and Verification

A. Background

RCRA section 6002 requires that procuring agencies establish procedures for obtaining certifications of recovered materials content and for verifying the certifications. In the preamble to the 1988 paper procurement guideline, EPA noted that it is the mills, not paper vendors, who will have the appropriate data for certifying the content of paper and paper products. EPA stated that mills could use the average amount of recovered materials used in a specific product over a one-month period as the basis of certification. (See 53 FR 23557, June 22, 1988).

On May 1, 1995, EPA combined all of its recycled product recommendations, including the 1988 recommendations for paper and paper products, into one Recovered Materials Advisory Notice (60 FR 21385). In the May 1, 1995 RMAN, EPA recommends that procuring agencies "discuss certification with product vendors to ascertain the appropriate period for certifying recovered materials content. EPA recommends that, whenever feasible, the recovered materials content of a product be certified on a batch-by- batch basis or as an average over a calendar quarter or some other appropriate averaging period as determined by the procuring agencies (emphasis added)" (60 FR 21388, May 1, 1995).

B. Comments and Agency Response

a. Comment. Several commenters stated that postconsumer and other recovered fiber content should be averaged over a period of time. One commenter suggested averaging over a longer period, possibly several years, to provide an additional incentive for manufacturers to maximize postconsumer fiber usage during periods when collection of waste exceeds demand.

Response. EPA agrees with commenters that there may be instances in which postconsumer and recovered fiber content should be averaged over a period of time. EPA believes that a calendar quarter generally is a sufficient period of time, but recognizes that, in some instances, a longer period may be appropriate. EPA's general recommendations for purchasing recycled products, including EPA's recommendations for meeting the certification requirements of RCRA section 6002, are found in the May 1, 1995 RMAN, as discussed in the background section above.

EPA notes that other organizations addressing recycled product purchasing also recommend the use of average content. For example, the "Recommendations for Purchasing and Using Environmentally Preferable Paper" published by The Paper Task Force states that the "level of recycled content in a specific paper product is usually stated as the average percentage of recycled content for a mill's output of that grade over a given period of time, such as a month or quarter."XVI. Sawdust as Recovered Fiber

A. Background

Section 504(c) of Executive Order 12873 provides an alternative to the 20% postconsumer minimum content standard for uncoated printing and writing papers. Procuring agencies can purchase a product containing "50% recovered materials that are a waste material by-product of a finished product other than a paper or textile product." In the supporting analyses document for the draft Paper RMAN, EPA explained that at least two materials may meet this alternative standard, sawdust and materials such as cotton linters that are a by-product of processing cottonseed into oil. EPA cautioned procuring agencies the Executive Order specifies that these materials cannot meet the alternative standard unless they would be disposed in a landfill if they were not used in paper products.

B. Comments and Agency Response

a. Comment. Several commenters opposed the alternative standard. They primarily oppose the substitution of sawdust for postconsumer fiber.

Response. EPA reminds commenters that the underlying purpose of RCRA section 6002 is to promote resource conservation by fostering the use of products that contain recovered materials. While the primary objective of EPA's recommendations is maximizing the use of postconsumer fiber, the Agency also recognizes that there are other materials that can be used to manufacture paper and which could otherwise require disposal if not recovered for papermaking. EPA notes that the cotton fiber paper manufacturers use postconsumer fiber in conjunction with alternative recovered materials, and postconsumer fiber is used in some of the products made with sawdust-based pulp. The products in which these materials are used represent less than 1% of the new supply of printing and writing papers. Thus, the impact of the alternative standard on the overall use of postconsumer fiber is minimal.

b. Comment. A commenter requested that EPA clarify who is responsible for determining whether or not alternative materials will count towards recovered fiber content under Executive Order 12873.

Response. The Federal Environmental Executive is responsible for implementing Executive Order 12873. Under Section 504(c) of the Executive Order, the State in which the facility is located is responsible for certifying that the alternative material would be landfilled if it were not used in the manufacture of paper. These certifications are made to the Federal Environmental Executive.

c. Comment. A commenter stated that there is a discrepancy between EPA and Executive Order 12873 regarding how forest residues, including sawdust, are considered with regard to recovered materials content.

Response. The definition of "recovered fiber" in the final Paper RMAN does not include forest residues. However,

as the commenter notes, Executive Order 12873 provides an alternative recovered materials content standard that includes forest residues such as sawdust. Specifically, Federal executive agencies can purchase a product containing forest residues to the extent that such materials meet the following conditions established in Section 504(c) of Executive Order 12873: (1) the recovered materials must be a by-product of a finished product other than a paper or textile product, (2) the materials would otherwise be disposed of in a landfill, and (3) the State in which the facility is located determines that the materials would be disposed of if they were not used in the paper manufacturing process. To date, only two manufacturers have provided documentation to the Federal Environmental Executive that their product meets this alternative standard.XVII. Energy Issues and Cost/Benefit Implications of Paper
Recycling

A. Background

RCRA section 6002(e) directs EPA to consider specified criteria in providing guidance to procuring agencies regarding products containing recovered materials. The criteria pertain to the feasibility of using recovered materials in the product and to product performance and availability. RCRA does not require EPA to conduct a cost-benefit analysis before recommending content levels, nor does it require EPA to consider energy issues.

B. Comments and Agency Response

Comment. Several commenters recommended that EPA consider life-cycle analyses of kraft pulping compared to the use of postconsumer and other recovered fiber, as well as the environmental, energy, or economic benefits of using postconsumer and recovered fiber. Commenters also addressed the energy efficiency of integrated paper mills.

Response. Congress directed EPA to consider a narrow list of factors, which did not include cost-benefit analyses of life-cycle analyses. There have been a variety of energy studies conducted by EPA's water effluent guidelines program and others that show results contrary to the commenters'.

Contrary to the claims of many commenters, the Paper RMAN contains recommended postconsumer and recovered fiber content levels, not national, mandatory content standards. EPA's recommended ranges are based on the current market availability of products within those ranges. As noted in previous sections of this response to comments document, EPA has revised several of its recommendations to reflect new data about product content and availability. Therefore, EPA believes that it is cost-effective for mills to manufacture paper and paper products containing postconsumer and other recovered fiber because so many domestic are doing so. This is true of integrated mills as well as non-integrated mills and large mills as well as small and medium-size mills.

EPA does not require nor expect integrated mills to upset their energy balance in order to use postconsumer and other recovered fiber. If a mill finds that its energy

balance is upset by using postconsumer or other recovered fiber, it is not required to use that fiber. Instead, EPA expects that as paper machines are added or there is creep in capacity from a machine rebuild or de-bottlenecking, some or all of the pulp for the additional capacity will come from postconsumer and recovered fiber in a manner that ensures energy and economic efficiency in mill operations.XVIII. Availability of Recovered Fiber

A. Background

As EPA discussed above in the response to comments on the Applicability of the RMAN recommendations, market prices for recovered paper fluctuated significantly during 1995. When the draft Paper RMAN was published, prices for OCC, ONP, and OWP were increasing, and there were regional shortages of some grades of recovered paper. The shortages and high prices were caused by a number of factors, including increased demand for recovered paper by North American mills and by the strength of the export market.

B. Comments and Agency Response

a. Comment. Many industry commenters used the shortages and high prices for recovered paper as the bases for stating that (1) postconsumer requirements artificially constrain the supply of available fiber and provide disincentives for increased investment in additional recycling capacity, (2) EPA's recommendations would exacerbate the fiber shortages by causing different industry segments to compete against each other for fiber, (3) the upper end of some of EPA's recommended ranges should be lowered, (4) the RMAN does not recognize the recovered fiber shortage, and/or (5) government should assist the industry to increase recovered paper supply.

Response. It is too simplistic to blame recovered fiber shortages on government purchasing programs. Government purchasing provides an incentive to develop markets for recovered paper by creating demand for products containing these materials. It is hardly the sole factor influencing recovered paper markets, however. Recovered paper availability and pricing is governed by a host of inter-related factors, including export demand, paper machine conversions and re-builds, paper mill expansions, and the start-up of new deinked market pulp mills. Export demand alone accounts for approximately 20% of the destination of domestic recovered paper and was a factor in the 1995 supply fluctuations. Supplies of some types of recovered paper also fluctuate seasonally, particularly in response to demand for packaging, catalogs, and advertising for the winter holiday sales season.

Nor is it correct, as suggested by some commenters, that postconsumer requirements provide disincentives for increased investment in additional recycling capacity. As many industry commenters noted, new demand for recovered paper must rely on increased recovery of postconsumer paper because most of the preconsumer paper already is recovered. The latest American Forest & Paper Association capacity survey projects that between 1994 and 1998, the annual

growth rate for recovered paper consumption will be 4.9%, which is almost twice the rate of increase in overall capacity. Eighty percent of the increase in recovered paper consumption will be in OCC, which will mainly be used to feed new capacity in containerboard and boxboard. Mills are choosing to use recovered paper both because it is an economical source of fiber and because of customer demand for products containing postconsumer and other recovered fiber.

Further, EPA does not agree that it failed to recognize the recovered fiber shortage in the draft Paper RMAN. Both the supporting analyses and the preamble to the draft Paper RMAN provided an extensive discussion of the 1995 fiber shortages and requested comments on its impact on the industry's ability to meet the recommended content levels listed in the draft Paper RMAN. As discussed in the previous sections, EPA is adjusting several of the content recommendations in the final Paper RMAN in response to the additional information provided by commenters.

In addition, EPA is not ignoring supply issues. The Agency is funding a number of supply-related projects, including the Chicago Board of Trade recovered materials electronic exchange, a Northeast Recycling Council study of untapped sources of ONP and old magazines (in partnership with the Newspaper Association of America and the Canadian Pulp & Paper Association), the National Office Paper Recycling Project, and Recycling Economic Development Advocates and Recycling/Reuse Business Assistance Centers throughout the U.S. The Agency also funded two recently completed office waste paper supply projects.