

AMERICAN
FOREST &
PAPER
ASSOCIATION

August 3, 1993

Ms. Katie McGinty
Mr. Ken Connolly
Office of Environmental Policy
OEOB Room 360
The White House
Washington, D.C. 20500

Dear Katie and Ken,

Thank you for the courtesy of your time, Ken, on Friday. As our industry has repeatedly stated, TCF should be totally eliminated from the Executive Order and related documents.

Also, as mentioned in our meeting, the U.S. pulp and paper industry began conversations with you and others in the Office of Environmental Policy with the objective of providing the Office with the Printing-Writing Paper Division's recommendation on how to maximize paper recovery for recycling in their specific paper grades.

Obviously, it has been difficult for those not knowledgeable about paper industry operations to understand the "less-is-more" concept. Less recycled content per printing-writing sheet at this stage will bring many more commodity grade paper machines into the recycled-content market and, thereby, produce significantly more total tons of recycling in the printing-writing grades and in the overall paper industry. This is because the commodity machines, representing two-thirds of the installed grade capacity, are the most cost efficient and the least involved in the current manufacture of recycled content printing-writing papers.

More than 90% of all paper recycling gains since 1988 and into the foreseeable future will be "post-consumer," since virtually all pre-consumer recovered paper grades are already in use. Whatever the increases in overall paper recycling, at least 90% of that increase will come from the post-consumer waste stream. This fact is inescapable regardless of how terms are defined, however, impractical definitions can serve as obstacles and reduce the rates of increase for overall paper recovery and recycling.

We provided with you the industry's generally understood definition of a "commodity paper machine" which is based on the size of the machine (see attached). It is crucial to understand that both uncoated and coated papers are made on these machines. The other relevant point is that these machines are typically found in integrated paper mills -- mills which have already made major investments in pulping operations tied directly to their paper machines. It is the papers produced on these machines that are commonly understood to be commodity grades of paper by our customers, Wall Street analysts, the industry and environmentalists. If you cannot adopt a "50 percent OR 10 percent" approach for all printing-writing grades, we strongly encourage you to include all coated and uncoated free

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sheet and groundwood papers produced on these machines at these mills in your Executive Order definition of commodity grades.

It must again be strongly stated that a 15% minimum post-consumer content standard for paper produced by machines at these integrated mills will prevent many producers from making capital investments in expensive, specialized equipment to process recovered fiber for use in commodity printing-writing papers. While a greater minimum content level of recycled fiber per sheet of paper may sound better, a 10 percent minimum will result in greater consumption of recovered fiber.

Those who know best about the manufacture of paper are the papermakers, themselves. They are the ones who have developed the AFPA Printing-Writing Recycled Content Initiative to maximize overall recovery and recycling of printing-writing grades. Under the Initiative, manufacturers have the flexibility to produce and our customers the option to buy papers meeting either a minimum threshold of 10 percent post-consumer and/or processed recovered fiber OR a minimum threshold of 50 percent recovered paper fiber, based on fiber weight. The threshold minimums are designed to encourage the production of as many grades of recycled content printing-writing paper as possible and use of the greatest amount of recovered fiber in the production of printing-writing papers overall in the shortest period of time.

The term "processed recovered fiber" recognizes the need for sufficient supplies of minimally contaminated and economically available recovered fiber to run through new processing facilities to recover the fiber for reuse in paper manufacture. Specialized processing is required of these papers to remove inks, dyes, waxes, and water insoluble adhesives, etc. before the paper can be used in the remanufacture of recycled content printing-writing papers. Attached is the latest definition of processed recovered fiber under consideration at the ASTM.

As you mentioned, the "environmentally preferable" section of the draft Executive Order is based on policies established by the Office of Federal Procurement Policy (OFPP) Policy Letter 92-4. However, the Executive Order goes well *beyond* the scope of that policy letter without the benefit of public comment.

In the Executive Order, the environmentally preferable language "refers to products or services that are less harmful to *human health* and the environment" The inclusion of human health in this definition expands the category beyond that which was available for public comment in the draft policy letter in March 1992. While the policy letter was available for public comment and review, the Executive Order is not. In addition, the OFPP specifically states "the Policy Letter is not intended to dictate manufacturing nor copying

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practices," -- but the Order, in its current form, will dictate manufacturing practices, in our case totally chlorine free (TCF), thus adversely impacting the overall paper industry.

The draft Executive Order establishes a framework for product testing that includes the use of life cycle analysis. There is widespread acknowledgement that methodologies for life cycle analysis are not adequately formulated for use in determining "environmentally friendly" or "environmentally preferable" products and services, especially as they relate to human health. In *Green Report II*, the State Attorneys General state, "Although product life assessments or cradle-to-grave product analyses are expected to be extremely useful for evaluating the overall environmental effects of various manufacturing processes and products, the methodology for this type of assessment has not yet been fully developed." Similarly, the Federal Trade Commission stated in the agency's *Guides for the Use of Environmental Marketing Claims*, "These guides do not address claims based on a 'lifecycle' theory of environmental benefit. Such analyses are still in their infancy and thus the commission lacks sufficient information on which to base guidance at this time." Further, EPA, in its February 1993 *Life-Cycle Assessments: Inventory Guidelines and Principles* states, "Currently there is no single correct way to conduct a life-cycle assessment."

We understand that EPA and GSA are about to sign a Memorandum of Understanding (MOU) concurrent with the President's signing of the Executive Order, and that this document involves purchasing criteria based on environmental preference considerations. We hope the issues which are such concern to us about environmentally preferable designations in the Executive Order are not repeated in the MOU.

The subjects we've discussed are crucial to our industry. We urge thoughtful consideration of these issues in your modification of the final draft Executive Order. Thank you.

Sincerely,



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RC:mk

Enclosures

cc: R.Rubin
A. Rivlin
C. Browner

Commodity Printing-Writing Paper Machine

A commodity printing-writing paper machine is rated at 200 or more tons per day of production. The machine has a width of at least 200 inches, and runs at a speed of 2500 feet or more per minute. Papers made on commodity paper machines include coated and uncoated free sheet and coated and uncoated groundwood grades used in such products as magazines, catalogs, copy paper, paperback books, envelopes, business forms, directories, etc.

The paper industry definition of a commodity paper machine is generally understood in the graphic communications industry.

ASTM TERM TO BE BALLOTTED
August 1993

Processed Recovered Fiber - n - (paper) fiber from recovered paper material that has been treated, to the extent required, to minimize the effect of inks, dyes, toners, waxes, water insoluble adhesives or resins, or reactive, plastic, laminated or metalized coatings on the paper product to be made from it; excluded from this classification is fiber extracted from pulp substitutes or fiber from material containing only starch, filler, fiber, dyes when used in white tinting, fluorescent white dyes, water aqueous dispersable materials or non-paper manufacturing materials such as wrappers, baling wire, metal, glass and dirt.

Guest Editorial

Pulp, Paper, and EPA:
Linking the Environment and the Economy

By Carol Browner
Administrator
U.S. Environmental Protection Agency

As I write these words, and as you read them, the importance of the pulp and paper industry stares us right in the face. Without paper, newspaper, and magazine stock, we would have much more difficulty communicating with each other, advertising our products, or learning about the world around us. Without the paper products used in packaging and construction, our society would not be able to function. Indeed, the U.S. pulp and paper industry, which employs over 600,000 people and is the country's tenth largest industry measured by the value of shipments, is an essential component of our national economy.

At the same time, according to industry-reported data in EPA's Toxic Release Inventory (TRI), the pulp and paper industry is the third largest source of toxic pollutants in the country. In 1991, approximately 620 pulp and paper facilities released 242 million pounds of toxic pollutants into the environment. An additional 56 million pounds were sent off-site to publicly-owned treatment works or other treatment or disposal facilities. In 1991, your industry was the largest source of chloroform pollution in the United States, resulting in 91 percent of total national releases, and it was the third largest source of toluene accounting for 17 percent of all national releases.

Clearly, the pulp and paper industry touches the lives of virtually every American, both economically and environmentally. Your industry is a source of profits and jobs, and it is a source of environmental risk. Thus the question we face - private business and government agencies alike - is straightforward: how do we maximize the economic benefits of the pulp and paper industry, and how do we minimize its environmental risks?

In the past, these two goals often have seemed contradictory. But those of us in the Clinton Administration believe that it is possible to spur economic growth in ways that are environmentally sustainable, just as it is possible to protect the environment in ways that boost economic growth. We intend to do both, and our goals and methods can be seen in the approach we are taking to the pulp and paper industry.

First, we intend to move beyond an exclusive reliance on command-and-control government regulations to reduce the environmental risks posed by pulp and paper mills. Improved control or treatment technologies at "the end of the pipe" - by themselves - simply won't be good enough. We need to look "upstream" into the process, generating

those pollutants and seek opportunities for reducing them at the source through improved voluntary process changes, design modifications, and improved energy efficiency. Preventing pollution before it is generated can reduce environmental risks, costs, and liabilities, while often improving economic competitiveness. Pollution prevention also tends to have beneficial effects across all the environmental media - air, water, and land. I am committed to making pollution prevention the guiding principle of all our environmental efforts at EPA, and I applaud the pulp and paper industry's significant efforts to date in pursuing prevention opportunities in your facilities. Industry-initiated pollution prevention process changes and other facility improvements have already reduced wastewater loadings of dioxins and furans by approximately 75 percent at bleached papergrade kraft mills since the late 1980s, and have reduced loadings to other media as well. I strongly support your pollution prevention efforts thus far and challenge you, as well as your counterparts in other industrial sectors, to continue to make improvements in the future.

Besides emphasizing pollution prevention throughout EPA, I also want to make our more traditional regulations more sensible. Wherever possible, I want to simplify them and reduce the transaction costs faced by regulated business. In short, I want to reinvent EPA and make the agency more responsive to our "customers," one of whom is the pulp and paper industry.

For example, the Agency has begun to use a multi-media approach to regulatory development which we call "clusters." Traditionally, EPA has regulated industries medium-by-medium as different federal laws were passed to protect the air, water, and land. As we know, however, regulations to protect one environmental medium - like water - sometimes do not eliminate pollution but simply transfer it to another medium, as when wastewater sludge is dumped on land. Moreover, this regulation-by-regulation, pollutant-by-pollutant approach can be complicated, confusing, and costly for business.

We are moving to change this - to change the way we do business - by establishing a series of clusters with Agency-wide representation across all media. These clusters are designed to improve the quality of EPA's regulations and decisions by shifting the focus away from individual rules and isolated actions to a more integrated strategies that

reduce environmental risk in a coherent, coordinated way. At the same time, EPA's clusters are intended to simplify compliance and lower costs for regulated industries.

The cluster we have set up for the pulp and paper industry shows the value of this kind of cross-media, cross-program coordination. The Pulp and Paper Cluster is coordinating the development of several major rules that affect your industry: i.e., the revised effluent guideline for wastewater discharges, the maximum achievable control technology (MACT) rule for air emissions, a rule for land application of sludges, and a hazardous waste listing determination for sludges.

But in this case we are taking the cluster concept a step further by actually integrating the air and water rules. This is the first time EPA has attempted a multi-media, cross-program rulemaking, and we have high hopes and expectations.

The benefits of a joint rulemaking could be substantial. First, since air and water rules will be proposed at the same time, your industry can be more confident, more certain that the money you spend to control pollution today will not be undercut by a new rule tomorrow. Second, coordinated rulemaking should increase the net environmental gain and lower industry costs, while at the same time reducing the chances of cross-media transfers of pollution. Finally, improved Agency teamwork should reduce the cost of developing rules, an economic benefit that will be appreciated by all taxpayers.

This joint rule will encourage industry to use pollution prevention - not just end-of-pipe controls - to meet required standards. Although the rule will not specify process changes or specific technologies, it will set a level of performance that may be met best through a combination of pollution prevention process changes and add-on controls. You will be given the latitude to decide which mix works best in which facility.

In developing options for the joint rule, EPA also recognized the importance of encouraging and accommodating future technological advances. For example, from an environmental perspective, totally chlorine-free processes have great appeal. Yet I understand the technology is not fully developed. While some mills in the United States, Canada, Europe, and Scandinavia have developed processes that are chlorine-free, no kraft mills have yet succeeded in making high-brightness pulp from southern softwoods without using chlorine.

However, given the rapid pace of



Browner

technology, development worldwide and the growing demand for environmentally friendly consumer products, it is possible that a chlorine-free process for kraft mills will become available before the joint rule is finalized. In that case, the new process will be considered as EPA develops performance standards.

Besides setting a precedent for internal cooperation at EPA, the joint pulp and paper rule also is a first in terms of industry / EPA cooperation. Individual pulp and paper companies, the American Forest and Paper Association (AFPA), and the National Council for Air and Stream Improvement (NCASI) have made major contributions to the rule.

I enthusiastically support this open, cooperative process, because it will result in a rule more likely to meet our long-term environmental and economic needs. I hope it provides the basis for ongoing cooperation with your industry, and becomes a model for EPA cooperation with other industries as well.

Clearly, as we work together to meet our national environmental and economic goals, we still have much to do. Environmental quality in the United States is the envy of the world, but serious problems remain unsolved. The U.S. economy is continuing to grow, but more slowly, more sporadically, and with less job-creating potential than any of us would like.

But I believe we're on the right track. Government, including EPA, is beginning to work better, as our recent efforts with the pulp and paper industry suggest. Our support for voluntary pollution prevention, our willingness to rethink traditional regulatory procedures, and our commitment to support industry's flexibility in meeting mandatory standards signal important changes in how we are doing business at EPA. I intend to continue to make changes, to reinvent EPA, to work with customers like the pulp and paper industry, in order to link our national environmental goals more closely with our economic goals. I can think of no better way to serve the President, the American People, or the pulp and paper industry than by protecting the American environment and the American quality of life. ■

THE TOTALLY CHLORINE-FREE ISSUE

"...from an environmental perspective, totally chlorine-free processes have great appeal. Yet I understand the technology is not fully developed. While some mills in the United States, Canada, Europe, and Scandanavia have developed processes that are chlorine-free, no kraft mills have yet succeeded in making high-brightness pulp from southern softwoods without using chlorine."

Carol Browner
Administrator
U.S. Environmental Protection
Agency
Paper/Age July 1993

"Despite the widespread research and development, and some successful production runs, the consensus from the conference was that TCF (totally chlorine-free) bleaching has not gained the status of proven technology. Although several mills are producing TCF grades of bleached kraft pulp for specialized niche markets, there is no TCF process available which can produce, at competitive cost, high brightness market pulp, with equivalent properties to conventionally bleached pulp, from chips with a range of quality that permits companies to use all available forestry residuals."

Pulp & Paper Canada 94:5 (1993)
Report on Worldwide Conference
on Non-Chlorine Bleaching
Hilton Head, South Carolina (3/93)
400 Attendees/25 Countries

A COST/BENEFIT ANALYSIS OF TOTALLY CHLORINE FREE

(TCP) BLEACHING OF PAPERMAKING WOOD PULPS

1. Wood provides the fibrous raw material for 92% of the world's paper-making pulp; (more than 99% in the US.) US wood pulp capacity represents more than one-third of the world total, almost exceeding the sum of the capacity in the next four countries - Canada, Japan, the former USSR and Sweden. The US is the largest supplier of bleached chemical paper grade pulp to the global market.

2. Chemical wood pulping processes - dominated by the "kraft" or sulfate process - account for two-thirds of the world's wood pulping technologies. The recovery boiler system associated with the kraft process recaptures the original pulping chemicals while burning spent pulping liquors which contain non-fibrous residues extracted from the wood. This process makes it possible for kraft pulp mills to be largely bio-energy self-sufficient. Additionally, the kraft process produces pulp fibers which make papers with stronger performance characteristics such as burst, tear and fold. (Indeed the word "kraft" means "strong" in German.)

The other but minor chemical pulping process - sulfite - does not commonly have a recovery system and poses an environmental problem in the disposal of its waste pulping liquors. In the global mix of chemical pulping technologies, sulfite capacity has declined in both absolute and proportional terms.

Mechanical pulping processes comprise the remaining one-third of the world's wood pulping processes. While they produce so-called "high yield" pulps - retaining the non-fibrous materials such as lignin which discolors when exposed to sunlight - they do not have the strength, durability and longevity of chemical pulps.

3. About half of the world's wood pulp manufacture is bleached in order to brighten the naturally brown color of wood. A whiter paper provides sharper contrast and clarity for black and colored printing and writing. Further, by removing most of the remaining natural wood impurities, bleaching adds to the inherent strength of papermaking pulps and enhances the archival capability of the papers made from chemical pulp.

4. For many years, chlorine gas (elemental chlorine) has been the traditional agent for bleaching wood pulps. It has been not only the lowest cost option but, of the currently available commercial

wood pulp bleaching agents, it is the most "gentle" to the papermaking fibers and to the mill machinery. Substitution of chlorine dioxide for elemental chlorine, coupled with extended delignification with oxygen, has been increasingly practiced in order to reduce or eliminate the potential for generating chlorinated organic compounds believed to result from a reaction of excess elemental chlorine with precursors, including lignin. Pulp bleached without elemental chlorine but with chlorine dioxide are referred to as "ECF", i.e. elemental-chlorine-free.

5. Certain pulp bleaching processes which use no chlorine-based compounds at all are referred to as "TCF" i.e. totally-chlorine-free. These processes can involve oxygen, ozone, hydrogen peroxide and even pre-treatment of unbleached pulp with enzymes. Ozone is the most "aggressive" of the alternative non-chlorine bleaching agents and calls for particularly sensitive process controls as well as sophisticated metallurgy in the bleaching plant.

The TCF bleaching processes typically result in a kraft pulp which is less bright, has a higher dirt count and produce a weaker papermaking fiber than from the ECF processes. Indeed, papermakers in the primary pulp markets served by US producers reject TCF kraft pulps because of these deficiencies.

6. The global market for bleached kraft paper grade pulp is currently estimated at 29 million short tons, with global market demand for TCF bleached kraft pulp currently amounting to perhaps 1.6 million short tons or a little more than 5% of total world demand for bleached kraft paper grade pulps. Theoretical market capacity to produce TCF bleached kraft paper grade pulps is reported to be approaching 2.8 million short tons but clearly actual production and capacity utilization rates reflect the much lower level of current world demand.

None of the 12 bleached kraft pulp mills in 8 countries reported to have TCF bleaching capability has committed all of its bleaching capacity to TCF processes and regularly produce ECF pulp. While one company has announced its intention to install TCF kraft capacity in an existing US mill, there are currently no commercial supplies of TCF bleached kraft pulp available from domestic sources.

7. TCF demand is purely a European market phenomenon, created largely by the German pulp and paper industry in response to a Greenpeace initiative. The German industry itself could readily accommodate the TCF stipulation because it already manufactured a TCF pulp in its otherwise obsolete sulfite mills - a pulp which produces a lower strength paper and which has significant environmental problems.

8. Those producers of bleached wood pulps in other countries - largely in neighboring Sweden and Finland - who have responded to the German market demand for TCF Kraft pulp, (since Germany must import 60% of its papermaking wood pulp), have done so at considerable capital costs in order to develop a "niche" market for their exportable pulps. Prior to the recent 30% devaluation of the Nordic currencies, these were the highest cost market pulps in the world. However, in a currently weak global pulp market, consumers are increasingly unwilling to recompense those producers for their higher TCF pulp production costs.

9. When, in 1985, the association of chlorinated organic compounds with the bleaching of wood pulp was first detected, the Swedish pulp sector elected to respond by modifying its production processes because - unlike the US industry - it had not previously installed effective, secondary treatment of mill effluents. As a result, the US industry's success in addressing the environmental quality of mill effluents is already ahead of the Swedish industry which, incidentally, is able to comply with its regulation of AOX - (a quantitative measure of chlorinated organics in mill effluents) - on merely an average basis and not on a "not to exceed" basis as would be required of US bleached pulp mills.

10. Despite widespread research and development and the apparent success of some TCF production runs, the consensus from the March 1993 Worldwide Conference on Non-Chlorine Bleaching was that TCF "has not gained the status of an environmentally sound, proven technology." TCF processes are clearly more energy intensive than ECF processes. It remains to be seen whether non-chlorine bleaching processes would in fact result in any meaningful environmental improvement over ECF processes since TCF processes themselves generate unwanted and potentially harmful pollutants. In that regard, scientific comparisons of bleaching process options made by the Pulp and Paper Research Institute of Canada have revealed that "the effluents from totally chlorine free sequences.....were found to have the greatest chronic toxicity" to fathead minnow larvae.

11. The proposed White House Executive Order which would direct federal agencies to set future goals to purchase TCF papers absolutely contradicts EPA's recent judgement that the best available technology economically achievable (BAT) for US bleached kraft wood pulp mills by 1998 is one based on a combination of modified continuous cooking (MCC), the use of oxygen delignification and the substitution of chlorine dioxide for elemental chlorine, all designed to result in AOX levels of less than 0.5 kg. per metric tonne of bleached pulp produced. Pointedly, EPA did not chose TCF.

The US pulp sector is already moving voluntarily in the direction of the BAT prescription but the cost of converting all of the existing US bleached Kraft wood pulp capacity to meet EPA's water-related proposal has been estimated by the Stanford Research Institute (SRI) to approach \$5 billion.

12. It is important to understand that the process changes required by the water-related aspects of EPA's proposed BAT prescription would not provide an incremental step towards TCP bleaching should that process ultimately be required of US bleached kraft pulp mills. Indeed, if the entire US bleached pulp sector were to implement the proposed BAT prescriptions by 1993 and then subsequently have to switch to totally independent TCP technologies, at least half of the estimated \$5 billion cost of meeting the water-related aspect of BAT through chlorine dioxide substitution will have been entirely wasted.

In addition, a substantial portion of the \$1 billion already spent by the industry over the last few years on process modifications to reduce its discharges of chlorinated organic compounds - which relied heavily on chlorine dioxide substitution - would also be wasted.

A subsequent switch to the TCP bleaching option after implementing the BAT prescription would impose at least an additional capital cost on the US industry, estimated to exceed \$3 billion.

13. If US government agencies were to specify TCP-based paper in their purchases, they would be obliged to seek supplies from foreign sources at significantly higher cost, incurring the additional penalty of reducing domestic employment and a widening of the nation's trade imbalance. Foreign producers with excess TCP pulp capacity would welcome such a "Trojan Horse" as a means to enter the US market for bleached kraft pulp - the largest single-country market for bleached kraft pulp in the world.

14. From an overall environmental perspective, there is the very real prospect that a requirement of TCP bleaching processes on the US pulp and paper industry would lead to reduced paper recycling. Given the weaker performance characteristics of wood fibers bleached with non-chlorine agents, their ability to withstand the rigors of repeated recycling would be impaired.

15. The bleached kraft pulp sector of the US pulp and paper industry has already voluntarily made significant strides in improving the environmental performance of its mills. Should the White House send a signal through federal agencies endorsing TCP - after the EPA contemporaneously promulgated BAT as BAT - it would certainly add confusion to the domestic marketplace, increase uncertainty in the development of environmentally sound US regulations and impose a competitive disadvantage on the world's largest wood pulp and paper industry.

July 28, 1993

Magazine Publishers of America

575 Lexington Avenue New York, New York 10022 212 752 0055

DONALD D. KUMMERFELD
President

July 28, 1993

Ms. Kathleen McGinty
Deputy Assistant to the President & Director
Office of Environmental Policy
Room 360
Old Executive Office Building
Washington, D.C. 20501

Dear Ms. McGinty:

The Magazine Publishers of America (MPA) understands that the President is considering issuance of an Executive Order requiring federal agencies to purchase recycled content papers and "total chlorine free" (TCF) papers. We also understand that, in the Order, the threshold standard for recycled content for most printing and writing paper grades (including the coated paper used by most magazines) would be set at 50% total recovered fiber, with a minimum of 15% post-consumer content, to be raised to 20% in three to four years.

I. We urge that this Executive Order be reconsidered, and that the Environmental Protection Agency (EPA) be allowed to continue its process for developing reasonable federal procurement standards.

As you know, the Environmental Protection Agency is carefully addressing many of the issues involved in this area. Through its own activities and through the work of the Recycling Advisory Committee (RAC), it has consulted extensively with paper producers, paper users, and environmental groups to develop federal procurement standards. We urge that EPA's deliberations be permitted to continue without being by-passed by issuance of this Executive Order.

In the EPA consultations, there has been a clear recognition that coated and uncoated papers should not have the same requirements since coated papers have unique challenges in using recycled fiber. These challenges include the difficulty of coating paper that contains contaminants present in recycled fiber and the need for strong fiber, since part of the paper is composed of weak coating. The RAC, in 1992, recommended lower recycled content levels for coated papers; and, in March 1993, both the Environmental Defense Fund (EDF) and MPA recommended to EPA that coated papers have only a post-consumer standard, not a total recycled content standard.

II. While we support the federal goal of increasing the use of recycled paper, we believe that setting the threshold as high as 50% total recovered fiber with 15% post-consumer fiber may actually

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impede the ultimate goal of increasing the use of recycled fiber. Therefore, we oppose the contemplated 50%/15% standard.

First, the 50% total recovered fiber standard is clearly too high. A recent Franklin and Associates study stated that a full 98% of all pre-consumer waste paper is currently being recycled. Since a federal procurement standard is likely to become a de facto industry standard, a 50% total recovered fiber standard will likely cause a shortage of pre-consumer waste paper to be used in recycled paper both for government and for private industry. This will result in the price of recycled paper being driven up, without any guarantee that more material will be diverted from the waste stream.

Second, lightweight coated papers containing 50% total recycled fiber are not currently economically or technologically feasible for large-scale producers who use large paper machines. As a result, all recycled lightweight coated paper meeting the current de facto industry standard of 50% total recycled fiber with 10% post-consumer fiber are only produced on smaller machines owned by smaller-scale paper producers. The resulting quantity is not sufficient to supply high-circulation publications. For example, while Time Inc. prints the Canadian edition of Time and five other U.S. titles on recycled paper containing 50% total recycled fiber with 10% post-consumer fiber, it is unable to obtain enough of this paper to print its entire U.S. edition of Time on this paper, as it would like.

Third, regarding the 15% post-consumer standard, it is questionable whether many large mills will be able to reach this standard in the near future, especially in high grades such as lightweight coated paper. These mills were designed to use virgin wood pulp and cannot efficiently substitute large amounts of post-consumer recovered fiber (which contains contaminants) without causing costly machine breakdowns. While progress is being made by paper companies in producing coated paper in progressively lighter weights with progressively higher levels of both pre- and post-consumer fiber, there are significant technical difficulties to be worked out.

By beginning with a 10% post-consumer standard without a 50% total recycled content requirement, more mills would be encouraged to make recycled paper, resulting in the use of a greater amount of recycled fiber and the diversion of more post-consumer waste from the waste stream. Thus, magazine publishers who cannot now buy adequate supplies of recycled coated paper would be able to do so.

Fourth, a federal procurement standard may well be regarded as a de facto industry standard and be incorporated into federal and state environmental labelling laws. If the standard for calling paper "recycled" is raised to 50% total recycled content with 15% post-

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consumer content, those publishers currently using "recycled" paper with 50% total recycled content including 10% post-consumer content (a considerable number) will have no incentive to use that paper, and may well revert to using 100% virgin paper.

III. We believe that the Executive Order for printing and writing paper procurement should contain a single standard of 10% deinked fiber content.

The use of a deinked fiber standard or a "post-consumer or comparable" standard, such as that recommended to the EPA by the RAC, is important. All wastepaper containing inks requires deinking for recycling, whether the wastepaper is pre-consumer or post-consumer. Therefore, the distinction made should be whether the paper is inked, rather than whether it has reached the hands of the final consumer.

IV. We urge that an Executive Order mandating federal purchases of "total chlorine free" (TCF) paper be reconsidered.

First, under existing production technologies, totally chlorine free bleaching results in lower brightness and whiteness in paper, with no guarantee that the alternative bleaching processes are more environmentally benign. Magazines require coated papers with high whiteness and brightness to produce the high quality images associated with the medium. At the present time, this level of whiteness and brightness can only be produced with the use of some form of chlorine bleaching. A reduction of image quality would place many magazines at a serious disadvantage in competing with television and other media for advertising, thus threatening their economic survival.

Second, there is no evidence that alternatives to chlorine bleaching are more environmentally benign than certain chlorine bleaching methods. As you may know, bleaching processes using elemental chlorine result in the emission of dioxin, which is harmful to the environment. However, bleaching processes using chlorine dioxide result in a reduction of dioxin emissions to below measurable levels. We know of no research evidence that indicates that totally chlorine free bleaching (eliminating even the use of chlorine dioxide) will result in further reduction of dioxin emissions than is achieved through the use of chlorine dioxide.

MPA applauds the move by a growing number of paper mills to substitute chlorine dioxide for elemental chlorine, thus reducing dioxin emissions to below measurable levels. While we would support a phased-in elimination of elemental chlorine, we urge that alternative bleaching processes be studied more carefully before an Executive Order mandating government purchases of TCF papers is made.

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We strongly urge you to reconsider the draft Executive Order. Enclosed is our statement on federal procurement standards, presented at the public forum that was held by the EPA in March.

Sincerely,



Donald Kummerfeld

cc: The Honorable Al Gore
Mr. Thomas F. MacLarty

RECYCLED FIBER USAGE: A LOOK AT LEGISLATIVE AND OTHER TRENDS

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Presented at the:

1993 HARD COPY CONSUMABLES CONFERENCE
June 23, 1993

Good afternoon. I want to start by thanking his strategic decisions for the opportunity to address this conference. Although paper recycling is not the main theme of the conference, I am pleased to be with you today to share the thoughts and perspectives of the Jaakko Pöyry organization on the impact that legislation is having on recycled fiber usage. In the course of this speech I will also touch upon other trends which are affecting usage and will finish up by offering some observations on how we might best proceed in the legislative arena with some very simple programs.

Let me begin by pointing out that the usage of recycled fiber by the U.S. Paper Industry has increased dramatically over the last three years. In 1990, the industry utilized just under 22 million tons of recycled fiber. By 1992 this figure had climbed to over 26 million tons – an increase of approximately 20% or 4.3 Million tons. This advance was sparked by four major factors. First and foremost is the industry's commitment the use of recycled fiber. This commitment is both real and permanent since the industry has had to invest millions of dollars in order to be able to use these increased quantities.

Market demands have also accounted for some of the increase. As long as people want certain types of products with certain characteristics, including recycled fiber content, the paper industry has a history of responding to the marketplace.

Mandatory recycling laws have help to create new and additional supplies of recycled fiber. This in turn has encourage the industry use this valuable source of raw material. Lastly, the threat of legislative action has caused the industry to voluntarily use more recycled fiber rather than face the possibility of some ill defined legislative requirements.

The increased use of recycled has been centered on three major grades. In newsprint, a de facto 40% usage of recycled fiber has been more or less accepted as the industry goal without any need for legislative requirements. The containerboard industry has also increased its used of recycled fiber primarily because of technological advances which have made possible incremental capacity additions for which recycled fiber was the

perfect choice to fill the fiber needs. New capacity additions, based almost exclusively on recycled fiber, have fueled its use in the tissue area – the third of the product or grade areas.

However, in the printing and writing grades - the grades of most importance to the participants in this conference - the increases have been relatively small. In total, it would appear that only about 200,000 - 300,000 tons of additional recycled fiber have been used in these grades over the period of the last three years.

But why the lag in recycled fiber usage in printing and writing grades? There are two primary reasons. First there is tremendous confusion over standards, guidelines, criteria – call it what you may. This confusion essentially leads to inaction on the part of the industry because they are not sure what it is they are going to have to comply or try to comply with, and they are not sure whether or not it might change in the near future. The second reason is a decided lack of economics for the use of recycled fiber within the printing and writing sector of the industry. Let me expand on both of these points.

On the legislative side, Federal, state, and local legislative and regulatory activities fall into three main categories. The first is solid waste reduction which includes separation of materials for recycling, mandatory recyclables collection, and product bans. All of this is driven by the perception that we are running out of landfill space and something must be done about the crisis.

The second category is minimum content standards. Here the object is to establish the minimum threshold level below which a product cannot be called recycled or to mandate a minimum level of recycled material to be used. Normally, there is some kind of proposed penalty on the manufacturer or seller if the minimum content requirement is not met.

Procurement preference laws are the third category. These laws are aimed at establishing or promoting markets for recycled products. Preference laws set up rules and regulations whereby government agencies can purchase recycled content paper even if it is more costly than the virgin fiber based products.

Most legislative activity is directed at reducing the amount of material entering the solid waste stream. A secondary target is the establishment of mandatory recycling programs. Solid waste reduction goals at the federal, state and local levels vary between 25-50% to be achieved in the next 5-10 years. These laws are causing greater amounts of material to be collected and are attracting new companies to the marketplace for collecting, sorting, cleaning, and marketing of wastepaper.

State and local regulatory activities have taken a variety of approaches to solid waste reduction and recycling issues. However, most states allow local municipalities to meet source reduction or recycling goals in any manner they see fit. Only four states actually require municipalities to report their progress - minnesota, california, new jersey, and rhode island.

On the federal level, the primary bill governing solid waste management is the resource conservation and recovery act (or rcra). Although the potential reauthorization and proposed amendments to rcra were not passed in 1992, they could get new life in the clinton/gore administration. These new amendments, if passed, could have significant implications for the supply and demand balance of recovered paper within the u.S. The rcra amendments would have set national goals for 1995 and 2000. The bill establishes:

- A 10% source reduction of waste by the year 2000
- Recycling of 25% of the municipal solid waste stream (with certain exceptions) by the year 1995
- Increased recycling of the municipal solid waste stream by 50% the year 2000.

Some of the bill's other provisions have strong implications for the recovery of paper, as well as specific directives for encouraging demand for recycled paper products. Among those affecting the paper and paperboard industry are minimum annual recovery rates that would have to be achieved by the year 1995. Under the bill, if these overall rates were not achieved by the deadline, the epa would be required to set minimum recycled content standards for those grades not in compliance. These proposed minimum recovery rates are as follows: newsprint - 52%, corrugated containers - 60%, mixed paper - 20%, high grade deinking - 50%, and pulp substitutes - 100%. It should be noted that all of these minimum recovery rates are well within the limits of what we believe are the maximum practical recovery rates for these paper grades.

This provision of RCRA, is an attempt to put the american forest and paper association's (AFPA) recovery goal of 40% into law. However, afpa does not set specific end use product recovery goals, even though several products are likely to achieve the RCRA recovery rates. The only goal is an overall 40% recovery of both pre-consumer and post-consumer paper. Interpretation of the rcra amendments seem to indicate a 40% recovery of post consumer paper - a much more difficult goal to reach by 1995. By the time the reauthorization actually happens, 1995 and 2000 goals set in the current amendments would likely be revised to later years.

Other existing regulations and guidelines at the federal level are already having an impact on the demand for recycled content paper. Many of these regulations are aimed at government purchasing requirements. The Environmental Protection Agency (EPA) has issued a rule mandating the use of recycled content paper by any government agency (state or local) using at least \$10,000 of federal funds. The Federal Trade Commission

issued guidelines in 1992 to prevent the false or misleading use of terms such as "recycled content". The joint committee on printing has set policy guidelines and general specifications for paper purchases by the government printing office, the general services administration and other federal agencies. In 1990, this committee issued four new recycled paper specifications for:

- offset book
- groundwood forms bond
- plain copier paper
- 25% bond paper

The first three of these specification require a 50% secondary fiber content with post-consumer fiber encouraged but not required. The last specification requires that 75% recovered materials must be used of which not less than 25% must be either cotton or linen fibers. Again, post-consumer fiber is encouraged.

Many of the state, and also local, initiatives in the recycling areas have been aimed at market development. These include;

- price preferences which allow government agencies to pay more for recycled content product.
- paper procurement goals which set some sort of target levels for purchasing recycled fiber products
- tax credits for direct investment in recycling facilities
- outright grants and loans to encourage people to invest in recycling
- technical assistance, mainly in the collection and sorting area.

Earlier I mentioned there was some confusion over the standards for recycled grades for printing and writing papers. Let me briefly elaborate on this. The debate is over three specific areas.

First what should be the minimum content level, that is, the level of recycled fiber contained in in a product, in order for it to be called recycled?

Second, should both pre- and post-consumer materials be included in the recycled fiber specifications or standards?

Third, should there be 1 or 2 standards? That is, a standard for total recycled content and/or a standard for post-consumer content.

To make matters worse there are a multitude of standards or guidelines being pulmagated by what appears to be an alphabet soup list of agencies. Some of these are industry groups, others are private companies, some government agencies, and some public interest groups. In addition, individual states have set some of their own standards

and on top of it all we have Canada issuing standards or guidelines of its own.

Let us look for a moment at a few of the proposed standards for content requirement. As you can see the newsprint requirement is for all post consumer fiber with the level set at 40%. As mentioned earlier, this has been a standard which the industry has accepted in an overall sense, that is all newsprint taken together would have a 40% recycled content. This would allow the industry to produce a mixture of 100% recycled newsprint and also some 100% virgin newsprint and still be in compliance with the law.

In the printing and writing area, you can see that the total recovered or secondary fiber requirements are in the 40 - 50% range. However, the post consumer fiber content requirements are significantly lower - 10-15%. This difference in requirements is a recognition of the fact that it is more difficult to successfully use recycled fiber, particularly the post-consumer variety, in printing and writing grades and still maintain the product specifications required by the end users. (Note: I said more difficult, not impossible.)

With all of this uncertainty, one could easily expect that companies producing printing and writing grades would be sitting on their hands. This is simply not the case. Evidently, there are in excess of 800 brands of printing and writing papers with varying amounts of recycled fiber contents offered for sale in the U.S.

When we look at the dilemma facing the printing and writing paper segment of the industry, we really have to step back and ask ourselves the question — what are we trying to achieve? There are really three potential goals we could be seeking to achieve:

- solid waste reduction
- conservation of raw materials, (that is, trees)
- promotion of market demand

I do not believe we have to choose among these goals if we follow a rather simple, two step approach to the problem. On a legislative level we have to set goals for the overall recovery of paper. AFPA's 1995 goal of a 40% percent recovery rate is one such target. It is at least a reasonable goal, but one could debate outside this forum whether or not it needs to be reviewed and revised upward, particularly in later years.

The second simple legislative action would be a labeling requirement for any product claiming to be made from recycled fiber. The Labeling requirement would be to disclose the exact recycled fiber content as a percentage of the total fiber that is contained in the product. In order for a product to be called recycled at all, it should probably have some minimum content, say something like 10%.

Let us look a little bit more at these two simple steps. First an overall recovery target is easily set based on realistically achievable recovery rates for each of the various grades of recovered paper. It is also measurable. Lastly, it satisfies the first two goals, that is,

it reduces solid waste and conserves virgin raw materials.

The second step - recycled content labeling - doesn't require costly tracking of recycled fiber sources. It allows the marketplace to decide what products they are going to buy and what level of recycled content they will be satisfied with. This simple step also eliminates "politics" whereby various agencies compete with one another to see who can establish the "best" standards for a recycled content product. Finally, this step satisfies the third goal in that it does promote the market demand for recycled content products. I might also mention that it also satisfies the first goal - reduction of solid waste.

Conspicuously absent from the two simple steps is any discussion of pre vs. Post consumer fiber sources. The reason that I have not included this is very easy. Basically all pre-consumer fiber is currently being recovered and reused. Therefore, any real increase in recovery and reuse of recycled fiber will have to be of the post-consumer variety simply because there is no appreciable amounts of additional pre-consumer material available. This being the case, why try to put into law something which doesn't need to be legislated?

I would now like to briefly delve into the second premise for why the use of recycled fiber in printing and writing grades has not accelerated like it has in other grades. There are significant economic disincentives for both integrated and non-integrated mills. A non-integrated mill is one which does not have an on-site chemical pulp mill, although it may have its own mechanical pulp mill. Therefore, the mill relies on market pulp purchases of chemical fiber. On the other hand, an integrated mill is one that is fully integrated from the forest right through the end of the paper machine and has all of its own pulping facilities. It requires very little or no purchases of market pulp.

For a non-integrated mill, recycled fiber can be a very costly option. For the integrated mill, the significant capital investment in the existing pulping facilities may effectively prohibit the economic use of recycled fiber.

One of the most effective ways for the industry to add to the use of recycled fiber in any given grade is to have a new capacity be based on the use of recycled fiber. In the printing and writing area, there is already excess capacity today and as a result prices within this sector are under considerable pressure. Any meaningful new capacity will not be required for several more years. On top of all of this, there is the overhanging threat of the paperless office in the future. Will this become a reality? Will it greatly lessen the requirements for paper? We do not currently have the answers to these questions but they do create an uncertainty when one is considering adding new and costly capacity.

Non-integrated mills are usually smaller in size than integrated mills and will generally have a much more limited financial capacity for capital expenditures. This is particularly true if a mill is considering adding its own deinking plant which can cost in the 50-100,000 million dollar range. Assuming an integrated mill is purchasing market deinked pulp (or

dip), its current price of \$500-575 per metric ton (depending on post consumer content) far in excess of the current market price for northern bleached hardwood kraft pulp. The latter is currently around \$400 per metric ton. Southern hardwood pulps can be purchased at less than \$400 a ton, making the disparity with deinked pulp even greater. On top of all this, the market place premium for a recycled grade is currently at about the 5% level. However, it is shrinking and we believe that within the next several years will essentially disappear. The essence of what the marketplace is saying is that we will not pay you any more for recycled fiber content than we will for a virgin fiber based content product.

As mentioned before, an integrated mill can have a fairly significant fixed investment tied up in its pulp mill. This can easily be at the \$500 million level. Thus, the displacement of significant virgin pulp with recycled fiber would create a fairly costly situation for an integrated mill. For example, a mill with a 600,000 t/y pulp line would experience approximately a 10% increase in its virgin pulp costs if it replaced as little as 100,000 tons. This would raise its cost by more than \$2 million per year. Hence, it is a tremendous dis-incentive for an integrated mill to displace virgin pulp with deinked pulp.

However, there are some positives for an integrated mill. First because of its significant size and financial stability, it is usually able to absorb the high costs of deinked pulps, if the amounts are limited. Second, the mill could also afford the capital for its own deinking plant, if such a facility is economically viable. Lastly, these types of large integrated mills are more likely to have incremental capacity increases for which recycled fiber may be the perfect fiber source rather than an expensive expansion of the virgin fiber pulping facilities.

Conclusions

As we move forward into an increasing amount of recycling, I would urge that we try to accomplish the following four items. First, keep the regulations and guidelines as simple as possible. Legislative initiative has helped to promote recycling to some extent. However, it has also hindered progress when the regulations have become too complicated and where they conflict between various agencies. Second, we need to set some overall paper recovery goals as the primary emphasis of our efforts. This will ensure that we reduce the amount of solid waste and at the same time provide an abundance of materials the industry has demonstrated a willingness to use. Third, we need to allow the marketplace to determine the prices that will be paid for recycled fiber containing products and also the content levels at which they will purchase these products. If we allow the marketplace to work its will, companies will respond to it. Fourth, don't impose costly capital and operating costs on producers and their production facilities, particularly when these are not needed in order for us to achieve a reasonable set of goals when it comes to recycling.

LETTER TO PRESIDENT ABOUT AFPA



Natural Resources
Defense Council

PLEASE
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FAX TO:

Pat.

ORGANIZATION:

Office for Domestic Policy
White House, West wing, 2nd floor

THIS TRANSMISSION IS 2 PAGES, INCLUDING COVER SHEET.

FAX IS
FROM:

Jennifer Barnes

Natural Resources Defense Council, Inc.
40 West 20th Street
New York, New York 10011

IF THERE ARE PROBLEMS WITH THIS TRANSMISSION

PLEASE CONTACT: _____ AT (212) 727-4479.

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Natural Resources
Defense Council

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New York, New York 10011
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SEP 10 REC'D

Please deliver this fax

TO: Ms. Carol Rasco
Assistant to the President
For Domestic Policy
West Wing, Second Floor
The White House

FROM: Allen Hershkowitz, Ph.D.
Senior Scientist

DATE: September 10, 1993

You should receive _____1_____ page(s).

If this fax is not properly received or you have any questions regarding it please call Jennifer Burns at 212 727 4479.

Thanks.

----- MEMO -----

The copy of the letter from John Adams to President Clinton that you received this morning via Federal Express and Fax should have indicated in the first paragraph on page two that "an investment of approximately \$800 million is needed to provide the federal with all the printing and writing paper it requires..." I regret any confusion our previous communication may have caused.

*(This fax represents a
"correction" to attached fax)*

*ps
9-10*

ROZ

- ① We need to find out from Podesta or
whomever just who is handling
the letter to Pres. - or is this to serve as
original?
- ② In meantime send a CC
of all to Brian Burke - ~~for~~



Natural Resources
Defense Council

40 West 20th Street
New York, New York 10011
212 727-2700
Fax 212 727-1773

Please deliver this fax

TO: Ms. Carol Rasco
Assistant to the President
For Domestic Policy
West Wing, The White House

FROM: John H. Adams
Executive Director

DATE: September 9, 1993

You should receive _____ 6 _____ page(s).

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Thanks.



Natural Resources Defense Council

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September 8, 1993

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John H. Adams

Executive Director

**The President
The White House
Washington, D.C. 20500**

RE: RESPONSE TO AFPA LETTER AND MEETING REQUEST

Dear Mr. President:

A September 3, 1993 letter to you from a trade association, the American Forest & Paper Association (AFPA), purports to respond to a letter sent to you on September 1, 1993 and signed by more than 80 civic and environmental groups, including the Natural Resources Defense Council. The letter we signed urged that you include a requirement for the use of at least 15% post-consumer paper in your forthcoming Executive Order on Procurement of Printing and Writing Paper. In its letter to you AFPA also attempts to respond to a separate letter sent by NRDC urging that you include higher recycling goals in the Executive Order as well as goals for the purchase of paper made without the use of chlorine bleaching. I find that AFPA's response to both of these letters grossly distorts the problems Americans now face regarding paper waste, paper recycling and the effort of the U.S. paper industry in responding to those problems.

* AFPA asserts that 200 U.S. mills now use "recovered" paper in their production processes despite the absence of a federal standard. AFPA fails to mention that this occurred in large part because more than half of all states in the U.S., as well as many private sector organizations, do have a recycled paper procurement policy. Moreover, the Executive Order you are now contemplating will not be a "federal standard." Rather, it will simply attempt to reward those companies that have made investments into environmentally superior paper-making technologies (and those that are planning to make these investments) by giving them preference in federal government procurement decisions. This comports with your Administration's goal of making the U.S. government a leader in purchasing environmentally superior products. In fact, that more than 200 mills operating in the U.S. already rely "exclusively on

100% Recycled Paper

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Washington, DC 20005
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Fax 415 495-5996

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Los Angeles, CA 90014
213 892-1500
Fax 213 629-5380

212 Merchant St., Suite 203
Honolulu, Hawaii 96813
808 533-1075
Fax 808 521-6641

recovered [sic] paper for their raw material" belies AFPA's claim that a 20% post-consumer procurement standard will pose a costly burden on the U.S. paper industry. Indeed, if AFPA's claim that \$7.5 billion worth of investments into de-inking capacity are in fact being contemplated by the paper industry, this provides even more reason why the federal government should purchase paper made with at least 20% post-consumer fiber so that these investments remain viable. You should note that an investment of only \$800 is needed to provide the federal government with all the printing and writing paper it requires (300,000 tons) at 100% post-consumer content (and without chlorine bleaching). Since American taxpayers spent approximately \$11 billion last year alone in disposing of paper waste, this is clearly a jobs producing investment worth making.

- * AFPA's contention that a 15% procurement standard would result in less paper being recycled than no standard at all is absurd. It is belied by America's experience in the field of newsprint recycling, where state and local procurement requirements caused the shift to much greater uses of post-consumer fibers than would have otherwise occurred. And it belies our experience in the field of printing and writing papers as well, where state and local mandates are virtually the sole reason post-consumer fibers are incorporated into mill use at all. U.S. mills that blend de-inked fiber into their production processes currently do so almost entirely in response to procurement specifications.

- * AFPA states we have provided no data to support our claim that "the supply of... post-consumer paper significantly exceeds demand.." We do so now. As the attached chart from EPA's consultant Franklin Associates Ltd. indicates, total use of post-consumer paper in 1995, including exports (which account for more than 25% of total use), will be less than half of total supply (total use is projected to be 40,185,000 while supply is projected to be 97,670,000 tons). Since more than one-quarter of total use is exported to jobs abroad, there is certainly no doubt that supply exceeds demand. Ask any recycling coordinator in any U.S. city if better markets are needed for mixed residential papers and they will certainly confirm this. (See attached chart.)

- * AFPA's claim that they are not arguing for a replacement of RCRA's definition of "post-consumer" paper when they argue for a vaguely defined category called "post-consumer/processed recovered" paper is doublespeak. The management by paper and printing companies of overissues, printed converting scrap, (referred to as "processed recovered fiber") is not the waste management issue instigating so many local battles throughout the U.S. about whether tax dollars should be spent on incinerators and landfills or spent on recycling programs. The municipal waste problem is the solid waste problem our nation is now coming to terms with. It is not the solid waste problems faced by the paper industry that we read about daily in the headlines of newspapers throughout America, as public officials battle constituents about the design of their solid waste strategy: it is the problems faced by municipal officials as they try to deal with the public health problems posed by the mismanagement of municipal solid wastes. Rewarding a "processed recovered fiber" standard or including overissues and converting scraps in a definition of post-consumer paper will reduce by not even one pound the amount of wastes these officials will have to manage at taxpayer expense. It would be wrong for the Administration to purport to address our nation's interest in recycling municipal wastes while in fact addressing the very narrow interests of a few paper companies.
- * AFPA claims the U.S. is the world's largest recycler of paper. This is misleading since it relates merely to tonnage, not to percentage of materials recovered from the waste stream and reintroduced in mills as raw materials. Since the U.S. has a greater population than any European nation we will generate more tonnage. But the relevant issue is how do we compare in recycling relative to production. In this regard a recent report of the Congressional Research Service is clear. According to the Congressional Research Service "The U.S. rate of paper recycling also lags most of Europe and Japan: of 18 [OECD] countries, the U.S. ranked 15th..."¹

¹ McCarthy, J.E., CRS Report for Congress: Recycling and Reducing Packaging Waste: How the United States Compares to Other Countries, (Washington, D.C: Congressional Research Service, The Library of Congress, Nov. 8, 1991)

- * AFPA's argument that demand for chlorine free products is not increasing is disingenuous since AFPA itself has been aggressively fighting the expansion of these markets, as it is doing now with this Executive Order, in state and localities throughout the U.S. and within the private sector. The reference to a position offered by Administrator Browner is taken entirely out of context, since she actually indicated support for the type of non-regulatory market incentives this Executive Order would provide. The fact remains that U.S. paper companies relying on chlorine bleaching cannot market their product to major markets including Germany, Sweden and The Netherlands. This costs us American jobs. Moreover, AFPA's statement about the presence of chlorine in paper being recycled ("there is simply no such product" as chlorine-free recycled paper) is a red herring. NRDC and others have offered a definition of chlorine free recycled paper production processes that takes account of the chlorine contamination now characteristic of paper manufactured in the U.S. Our proposal refers only to the chlorine found in the virgin component of recycled paper. If the U.S. paper industry would stop relying on environmentally destructive chlorine bleaching technologies, which are commercially viable and thriving abroad, we would not have to worry about this issue and, indeed, many of the adverse impacts associated with dioxin in our waterways and our municipal waste disposal system would be avoided as well.

It is unfortunately clear to us that the U.S. paper industry is indeed in a situation the U.S. auto industry was in twenty years ago. At that time, consumer demand for a fuel efficient car was viewed as a temporary phenomenon by U.S. auto executives who failed to make the requisite decisions to invest into the commodity consumers wanted, i.e. a high mileage vehicle. On the other hand, responding to that consumer interest, the German, Swedish and Japanese auto manufacturers were simultaneously able to capture a greater market share, modernize their manufacturing facilities and, in so doing, increase the efficiency of their auto-production process overall. The rest is history. Efforts by the environmental community to promote federal fuel efficiency standards actually worked to preserve some of the auto industry's fragile market. We are doing so again today in the field of recycled paper production.

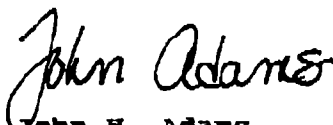
It is unfortunate that a trade association such as AFPA insists on offering Americans "lowest common denominator"

trade group politics in lieu of economically competitive and environmentally beneficial public policies. In so doing they are completely out of sync with the majority of Americans who want to see a federal recycling procurement policy.

We reiterate our request that your Executive Order require a 20% post-consumer content in the year 1994 and a 40% post-consumer content five years from now, as well as incorporating a goal encouraging paper to be made without the use of chlorine bleaching. Not doing so would cause us to lose a truly historic opportunity.

We hope you find these clarifications helpful as you consider your Executive Order and we would like to reiterate our request to meet with you or Vice President Gore prior to its signing.

Respectfully,



John H. Adams
Executive Director

cc: Vice President Al Gore
Thomas F. McLarty, Chief of Staff
Leon E. Panetta, Director of OMB
Robert E. Rubin, Assistant to the President for
Economic Policy
EPA Administrator Carol Browner
Carol H. Rasco, Assistant to the President for Domestic
Policy
Kathleen McGinty, Director, Office of Environmental
Policy
Alice Rivlin, Deputy Director of OMB

Table 10

RECOVERED PAPER NECESSARY TO MEET REQUIREMENTS UNDER PROPOSED OR ACTUAL STANDARDS, 1995 (1)
(In thousands of tons)

Product Line	1995 New Supply (2)	Proposed or Actual Standards (3)								
		RAC Proposed			EPA Guideline		New York State		California State (7)	
		Total	Traditional Postconsumer	Postconsumer (or Comparable)	Total	Post- consumer	Total	Post- consumer	Sec- ondary	Post- consumer
Newsprint	15,500	1,824	1,824	1,824	1,459	1,459	1,550	1,550	2,188	2,188
Printing-Writing Papers	28,270				2,019	0	1,414	283	1,414	283
Uncoated P-W Papers	19,113	1,385	300	410						
Coated P-W Papers	9,157	419	70	105						
Tissue Papers	8,400	2,731	1,800	2,389	631	631	2,048	1,024	1,707	341
Construction Paper	1,800	800	600	650	0	0	0	0	500	100
Uncoated Paperboard										
Corrugated Containers	28,500	7,600	6,500	6,650	5,542	5,542	1,140	499	9,500	1,900
Folding Cartons, Other	5,430	5,732	3,400	3,439						
Coated Paperboard	8,920	2,076	1,200	1,036						
Boxboard, Other	12,350				1,098	1,098	3,335	1,297	3,431	686
Paper Packaging	4,850	218	80	108	27	27	243	97	269	54
Total for Standards	97,670	22,781	16,724	16,517	10,775	8,184	9,729	2,749	19,006	3,652
Other uses of recovered paper										
Products varying from standard (4)		8,089	5,264	7,273	18,075	12,282	19,122	16,269	9,842	15,486
Net Exports (5)		10,515	7,752	8,762	10,515	7,752	10,515	7,752	10,515	7,752
Other Uses (6)		820	820	820	820	820	820	820	820	820
Total Use of Waste Paper (8)		40,185	29,810	33,466	40,185	29,810	40,185	29,810	40,185	29,810

Notes:

- (1) Requirements calculated based on standards for each product (Table 8), on market share of product meeting each standard (Table 9), and on yield loss for each grade (Table 11).
- (2) From Table A-2 and A-9.
- (3) See Table 6 for definitions of standards. Calculations include an adjustment for yield loss in manufacturing process (except for New York State, which bases its standard on recovered paper used, rather than content).
- (4) Obtained by difference. Some paper products will contain recovered paper in excess of the standards; some will contain less; and some will contain no recovered paper. No basis for estimating this amount was determined.
- (5) From Table A-4.
- (6) Insulation, animal bedding, etc. From Table A-4.
- (7) California standards for newsprint apply to postconsumer only.

Source: Franklin Associates, Ltd.

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Coated P-W Papers	9,157	419	70	105						
Tissue Papers	6,400	2,731	1,600	2,389	831	831	2,048	1,024	1,707	341
Construction Paper	1,800	800	800	850	0	0	0	0	500	100
Uncoated Paperboard										
Corrugated Containers	28,500	7,800	8,500	8,650	5,542	5,542	1,140	499	9,500	1,900
Folding Cartons, Other	5,430	5,732	3,400	3,439						
Coated Paperboard	6,920	2,076	1,200	1,038						
Boxboard, Other	12,350				1,098	1,098	3,335	1,297	3,431	686
Paper Packaging	4,850	218	80	108	27	27	243	97	269	54
Total for Standards	97,870	22,781	18,274	18,811	10,775	7,586	9,729	4,749	18,008	3,682
Other uses of recovered paper										
Products varying from standard (4)		8,089	5,264	7,273	18,075	12,282	19,122	16,289	9,842	15,486
Net Exports (5)		10,515	7,752	8,762	10,515	7,752	10,515	7,752	10,515	7,752
Other Uses (6)		820	820	820	820	820	820	820	820	820
Total Use of Waste Paper (6)		40,185	29,610	33,468	40,185	29,610	40,185	29,610	40,185	29,610

Notes:

- (1) Requirements calculated based on standards for each product (Table 6), on market share of product meeting each standard (Table 9), and on yield loss for each grade (Table 11).
- (2) From Table A-2 and A-B.
- (3) See Table 6 for definitions of standards. Calculations include an adjustment for yield loss in manufacturing process (except for New York State, which bases its standard on recovered paper used, rather than content).
- (4) Obtained by difference. Some paper products will contain recovered paper in excess of the standards; some will contain less; and some will contain no recovered paper. No basis for estimating this amount was determined.
- (5) From Table A-4.
- (6) Insulation, animal bedding, etc. From Table A-4.
- (7) California standards for newsprint apply to postconsumer only.

Source: Franklin Associates, Ltd.

**AMERICAN
FOREST &
PAPER
ASSOCIATION**

September 10, 1993

**Mr. Peter Yu
National Economic Council
The White House
Washington, D.C. 20500**

Dear Peter,

The question #3 "answer" is essentially correct, however an amplification of the points raised would significantly increase understanding of the issue and help the President with his decision.

There is no technical barrier to producing most commodity grade uncoated printing-writing papers with 15% postconsumer content. The exceptions are on the lightweight end of the grade spectrum. On the coated side, the lightweight grades are currently limited to 10% but, over time, can get to 15%. Generally speaking, coated grades are a greater technical challenge.

Before moving to the next and most relevant point, I wanted to underscore a related point of vital importance to overall increases in printing-writing recycling. This point has been frequently dismissed by some members of the Administration in conversations involving the Executive Order (EO).

With the exception of the four or five papers cited in the earlier draft Executive Order as "commodity grades" and, therefore, out from under the 50% total recovered fiber requirement; all other true commodity grades will be subject to the 50% as well as a postconsumer content level. Under this approach, the EO disregards decades of worldwide industry practice and nomenclature in using the term "commodity" which will wreak havoc and create untold confusion in an already confused and much, much larger private sector marketplace for printing-writing papers.

Extensive industry research shows that a confused marketplace is a known and acknowledged deterrent to the expansion of recycling in the printing-writing grades. The results of this research are what prompted the printing-writing producers to develop their initiative, which is simple in its definitions yet flexible, because it focuses on minimums and relies on marketplace competition to drive the recycled-content levels higher, while allowing everyone to participate.

Additionally, no other true commodity papers, other than those cited as such in the EO, will be considered by the marketplace as bona fide printing-writing recycled content papers. This is because of the impossibility of commodity machines to effectively use 50% recovered fiber in the printing-writing grade structure, and why the producers adopted a "50% or 10%" as their minimum. In this approach, the smaller machines get the advantage of higher numbers for total recovered fiber, while the bigger machines can be cost competitive but with lower levels. Remember, all the small machines are already in use, and they will not opt out. It's getting the big machines in that is necessary to significantly increase supply.

Returning back to the second point addressed specifically in the question #3 "answer," the economic/technical barriers which were the subject of half of the overall answer.

Given industry's current condition, few totally new "greenfield" mills will be built over the next five years. Capacity expansions, upgrades and conversions will provide the only available paths to growth. Therefore, one must look at existing mills and installed equipment as the basis for rating future growth potential, particularly in the printing-writing grades.

While 15% postconsumer doesn't seem that much more, it is half again as much as 10% in an operational environment not presently equipped nor designed to handle wide or broad tolerances in fiber composition. Given the non-uniform texture of recycled pulp compared to virgin; clearer understanding, engineering-in, and dealing with broader tolerances on huge, high-speed paper machines are a must. Operating these machines is not for the faint of heart, and "just 5% more" is no small matter. These machines are almost as wide as a football field, almost three football fields long, and spew out over one-half mile of paper per minute. The stock preparation systems, feeding systems and, most particularly, the coating blades and finishing systems must be re-engineered. This involves time, money and experience and cannot be dismissed lightly.

Site-specific mill economics, not just how much new and scarce capital is needed, is the deciding factor in adding recycled-content. Additionally, and as has been pointed out before, for the printing-writing commodity producers who represent almost two-thirds of the total production of these grades, there is not only a very big difference between 10% and 15%, but a very big fiber consistency difference between postconsumer and postconsumer/processed recovered fiber.

What has also not been factored into the answer to question #3 is the most basic of all axioms involving recycled content printing-writing papers -- "I can't make it, if I can't get the raw material." Unlike all other recycled content products, printing-writing grades can only utilize in volume the top-most, highest-valued recovered fibers because of the very strict performance and consistency specifications required of the products they produce. There is not a respected consultant who has studied the matter, who has not expressed very real concerns about lack of available supply of acceptable postconsumer recovered fiber for use as a raw material, once the commodity machines begin to move into the recycled content grades.

Mr. Peter Yu
September 10, 1993
Page 3

One can imagine what the law of supply and demand will do to the cost basis, when limited supply constraints set in for those who have converted their mills to recycled-content, and you can appreciate the cautiousness and reticence of going forward by all those who are "on the fence" about whether or not to enter into these markets with their commodity machines.

To the specific point of 10% versus 15% postconsumer, the printing-writing sector's most recent survey shows that between 6-12% of the total commodity grade capacity of 17.5 million tons will manufacture recycled content paper at the 15% postconsumer level. At the 10% postconsumer level, that figure jumps significantly to 25-30% of capacity. The 15% postconsumer level estimate is aggressive, while the range for 10% is on the conservative side.

Peter, no one disputes that to make more meaningful gains in decreasing paper flows to landfills, the big commodity paper machines must get involved. While the government is only a small percentage purchaser, its role with President Clinton's leadership will be immense in this critical area. Don't let him march out with high numbers on the front end expecting big success, because there are very real factors involved here. This is not an issue that should be decided on emotion alone.

As you can see from the attached letter to the President, no one is a bigger recycler than our industry. We want to grow much bigger, and we want President Clinton to be able to be a part of this growing success story. We are not out to low-ball the Administration, rather to help you understand that having your actions positively impact the broadest range of industry players will result in diverting the most paper. Paper diversions reduce landfill burdens. A focus on the bigger picture will produce bigger total volumes of recycling in the printing-writing grades; focusing small will get bigger numbers in fewer papers, will divert fewer total paper tons from solid waste, and will minimize any potential claim of Presidential leadership tied to meaningful results in helping reduce the burden on our nation's landfills.

Please give me a call if any of this needs clarification and, again, thank you for the opportunity to clarify this issue.

Sincerely,



Red Cavaney
President

RC:mk
Attachment

**AMERICAN
FOREST &
PAPER
ASSOCIATION**

**Red Cavaney
President**

September 3, 1993

**The President
The White House
Washington, D.C. 20500**

Dear Mr. President

A September 1, 1993 letter to you from environmental groups, and others interested in the draft Executive Order pertaining to federal procurement of recycled goods, contains several misstatements, including the following:

- **The letter asserts that "a standard of at least 15 percent post-consumer content ... is the lowest level of recycled content that will provide an incentive to the paper industry to increase investments in recycling." This stands in stark contrast to the facts. Currently, there is no federal standard pertaining to post-consumer content in printing and writing paper, yet the paper industry has 200 mills operating in the United States which rely exclusively on recovered paper for their raw material. Again, with no federal action on the horizon, the paper industry in 1990 embarked upon a voluntary increase in recycling capacity which, by 1995, will encompass more than 130 facilities and involve approximately \$7.5 billion in investments over the 1988-1995 investment cycle.**
- **The writers contend that, "Adopting a procurement policy that requires less than 15 percent post-consumer content would be worse for recycling than no action at all." As was noted in AFPA's August 6 letter to Peter Yu of your staff, requiring a 15% post-consumer content in printing and writing papers will result in less recovered paper being used, not more. Only five to ten commodity machines are likely to produce on a regular basis paper meeting the 15 percent level. At the levels suggested by the printing-writing producers, approximately twice as much post-consumer/processed recovered fiber could be used -- and possibly much more, with an optimal industry forecast of 50% percent industry participation (see attached chart).**
- **The letter provides no supporting data that, "the supply of...post-consumer paper significantly exceeds demand..." Increases in the use of recovered paper in the printing-writing grades will come primarily from used office paper, which is currently being recovered in line with growth in recycling capacity. EPA's consultant, Bill Franklin, projects a shortage of many types of recovered paper, including newspapers and corrugated containers, by 1995, and office papers beyond. Over the longer term, the industry has very real concerns about the supply of quality, source-separated recovered paper.**

**1250 Connecticut Avenue, N.W. Second Floor, Washington, D.C. 20036
Phone: 202-463-2700 Fax: 202-463-2785**

- The printing-writing producers are not suggesting that the Executive Order change or expand the definition of "post-consumer". Rather, they are asking that a larger universe of recovered paper - clearly identified as "post-consumer/processed recovered fiber" - be included in the Executive Order.

In its recent news release, the Natural Resources Defense Council (NRDC), a signator of the earlier referenced letter, also makes numerous errors. Among them that the U.S. ranks below the European Community in paper recycling. The facts are as follows:

- The U.S. is the world's largest recycler of paper. We recover more paper than any other region of the world. In 1991, the last year for which worldwide data were available, the U.S. recovered 28 million tons of paper. The entire European Community accounted for 20 million tons (with Germany at 7.5 million) and Japan recovered 14.7 million tons. Our rate of recovery essentially matched the average of all EC countries at 37%. Only two EC countries exceeded a recovery rate of 40% (where the U.S. will be this year), and over half the EC was under the U.S. recovery rate. In 1991, the U.S. accounted for one-third of all paper recovery. Source: Pulp and Paper International, October 1992, page 32.
- The U.S. paper industry is not where the auto industry was 20 years ago. During a time of economic difficulty, the industry has invested at an unprecedented rate on modernization, new capacity - including recycling capacity - and in environmental improvement. To that end, in its recent survey, Fortune rated only two industries as earning an "A" on their report card for international competitiveness; the U.S. forest and paper industry was one.

It is also worth noting, that while well over 90% of the projected increase in U.S. paper recovery will be from post-consumer sources, no other country outside North America makes the pre-/post-consumer distinction. In other countries, "post-consumer" paper is anything outside the paper mill.

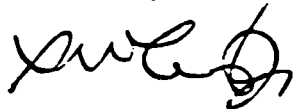
- Contrary to NRDC's contention, a rush to impose totally chlorine free (TCF), a technology whose time has not come, will hurt, not help, American industry's competitiveness in the world. The U.S. pulp and paper industry's efficient use of environmentally sound bleaching practices using chlorine compounds has allowed it to become the world's top producer of pulp, paper and paperboard. In fact, exports are the major engine of the industry's demand growth. Sixty percent of production increases since 1988 were derived from foreign demand.
- NRDC's contention that demand for TCF products is growing is just not true. The fact is that demand has stabilized at a very low level. The reasons are primarily related to the inability of current TCF technology to meet customer requirements. First, as EPA Administrator Browner acknowledged, "the technology is not fully developed" and "no kraft mills have yet succeeded in making high-brightness pulp from southern softwoods without using chlorine." Second, there are other customer needs, such as high absorbency, low dirt counts and superior strength, that cannot be met without bleaching with chlorine compounds.

What NRDC refuses to acknowledge is that while the industry has every reason to feel confident of maintaining its international competitiveness, TCF paper purchasing goals will jeopardize its position in our country. The only announced U.S. manufacturer of TCF bleached kraft pulp recently decided to shut down operations for the remainder of 1993. As a consequence, the Federal government would find itself buying virtually all its purchases from foreign suppliers and underwriting solely foreign jobs.

- NRDC's allusion to "chlorine-free recycled paper" also is misleading: there simply is no such product. The fact is that since chlorine compounds are found in cellulose fibers in wood, they are a component of all paper—including TCF paper. Since there is no commercially available method to remove chlorinated compounds from any paper, regardless of the process used, no paper products can be literally chlorine free.
- It is equally important to know that paper made from conventionally bleached pulp is actually more desirable for recycling than TCF paper because chlorine or chlorine compounds only minimally impact cellulose fibers as they remove the lignin and other unwanted components from wood. Chemicals used in TCF processes, in contrast, are far less gentle, producing paper with weaker fibers. This difference is critical because the stronger fibers found in conventionally bleached paper make that paper stronger and amenable to being recycled numerous times. On the other hand, TCF paper fibers make it weaker and limit its recycling potential.

We hope you will find these clarifications helpful in your consideration of the pending Executive Order, and wish to renew the industry's request to meet with you prior to signing the Order.

Respectfully,



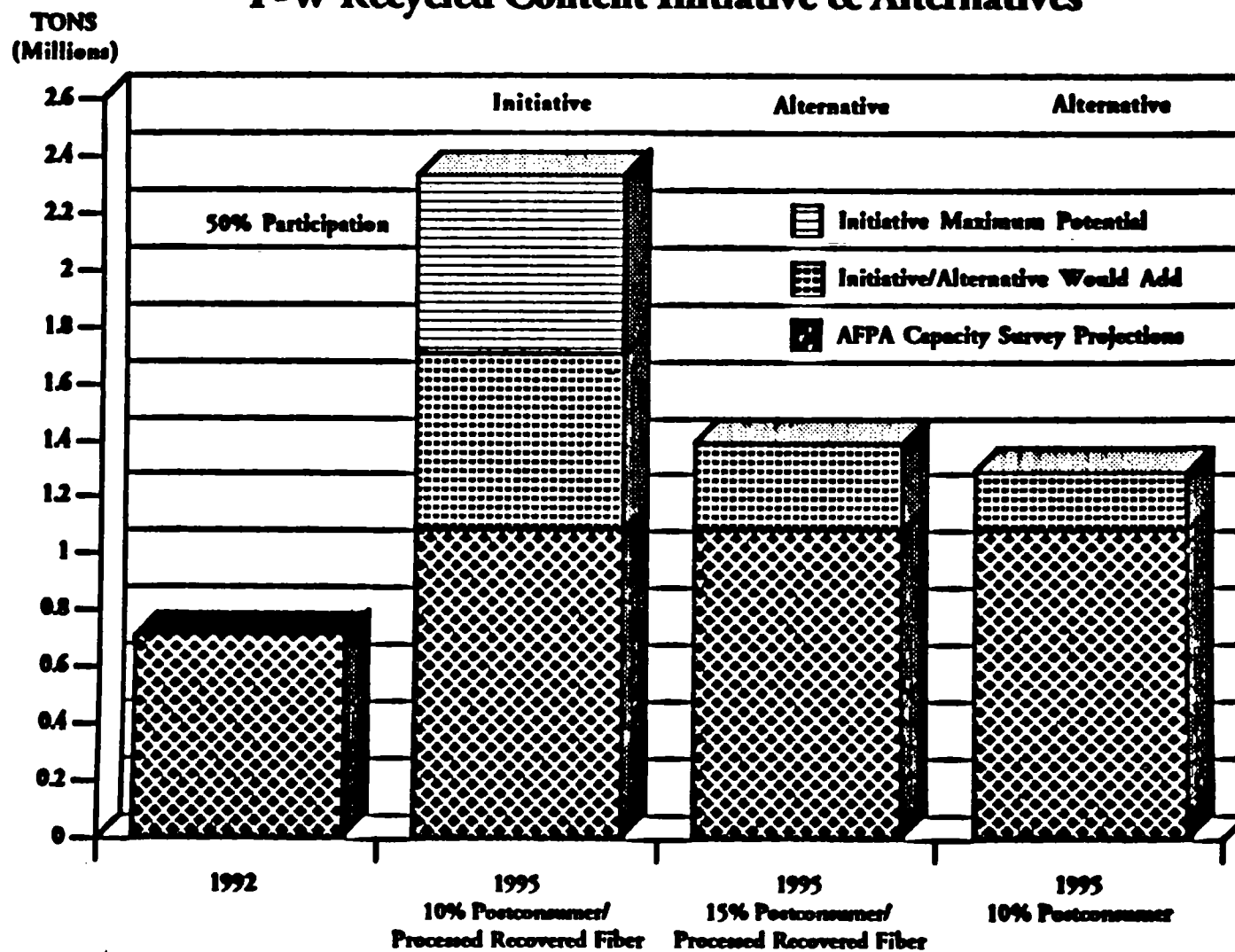
Red Cavaney

ltr0903.ppe

cc: Vice President Al Gore
Thomas F. McLarty, Chief of Staff
Leon E. Panetta, Director of OMB
Robert E. Rubin, Assistant to the President for Economic Policy
EPA Administrator Carol Browner
Carol H. Rasco, Assistant to the President for
Domestic Policy
Alice Rivlin, Deputy Director of OMB
Kathleen McGinty, Director, Office of Environmental Policy

Printing-Writing Use of Postconsumer/Processed Recovered Fiber

P-W Recycled Content Initiative & Alternatives



Adverse Economic Impact of Current Federal Initiatives on the U.S. Pulp & Paper Industry

The U.S. paper industry has spending underway, or anticipated, to address the following areas of interest to the federal government: (1) At a minimum, EPA's current cluster rulemaking (combined air and water) will require almost \$6 billion (EPA estimate) in new industry capital prior to 1998. (2) Conversions and expansions to increase the use of recovered paper in industry recycled and recycled-content products are currently projected at \$7.5 billion for the 1988-1995 time frame. (3) The new taxes to be levied upon the industry annually as part of the deficit reduction package will reach a minimum of \$300 million.

The cumulative impact of several additional non-coordinated, major federal policy initiatives has the potential to severely impact the paper industry just as it completes a decade-long investment cycle to secure its global competitiveness for the future. The following additional claims on industry capital provide virtually no incremental benefits to the public but will adversely impact the industry's international competitiveness, exports making up 60% of the industry's growth over the past five years:

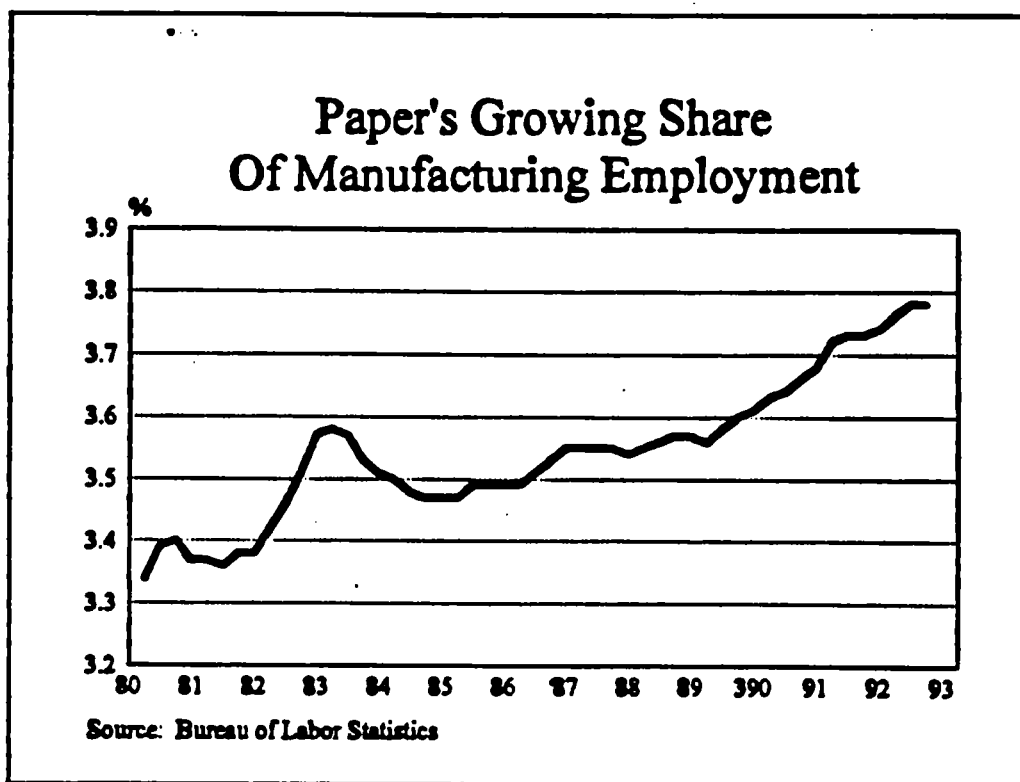
- The inclusion of unneeded oxygen delignification in the EPA cluster rulemaking will add an additional \$4 billion in capital costs and millions in additional operating costs on top of the \$6 billion earlier cited.
- Inclusion of chlorine-free provisions in the President's Recycled Goods Executive Order, if translated to the broader private marketplace which has been the historical case with recycled content guidelines and printing-writing papers, will cost the industry approximately \$3 billion in capital costs and hundreds of millions of dollars of increased annual operating costs on top of all of the earlier mentioned potential levies. And, it will render as obsolete over \$1 billion in recent investments to reduce organo-chlorines. More importantly, sufficient technology does not presently exist to manufacture the full range of quality pulp & paper products utilizing U.S. fiber sources.
- The application of a narrow post-consumer definition and high recycled-content levels for printing-writing papers in the President's Recycled Goods Executive Order will require hundreds of millions of dollars of capital spending for inefficient investments which will not significantly increase the amount of paper recovered from the solid waste stream for recycling.

In addition to these potential capital requirements, the Clinton Administration proposes to reduce timber harvests on federal forests in the Pacific Northwest and northern California by 6 billion board feet annually. The wholesale value of this in today's lumber market is \$2 billion. The lost production opportunity will cost 85,000 direct and indirect jobs.

Taken together, these developments will drain the industry's cash flow by billions of dollars annually and will lessen the industry's financial strength. Paper's position as a globally competitive industry, offering secure, well-paying jobs for three-quarters of a million American workers, will clearly be jeopardized if these additional impositions on the industry are realized.

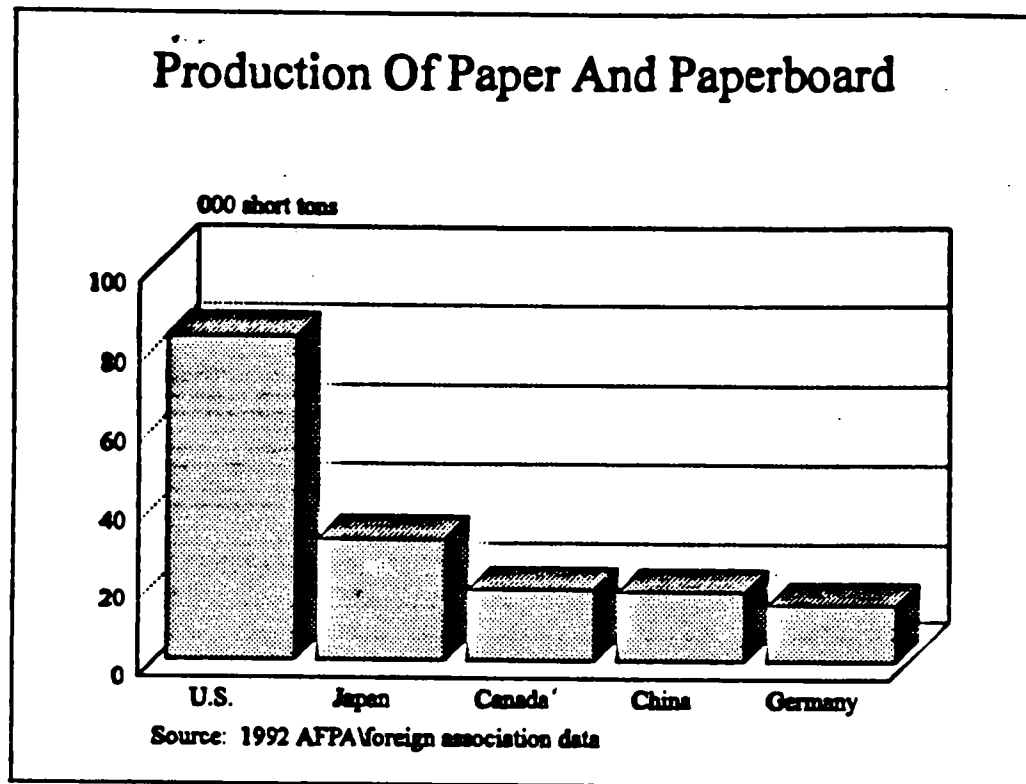
Protecting the Environment & Maintaining Competitiveness

— A Balanced Solution



American Forest & Paper Association
1250 Connecticut Avenue, NW
Washington, DC 20036

Introduction to the Paper Industry

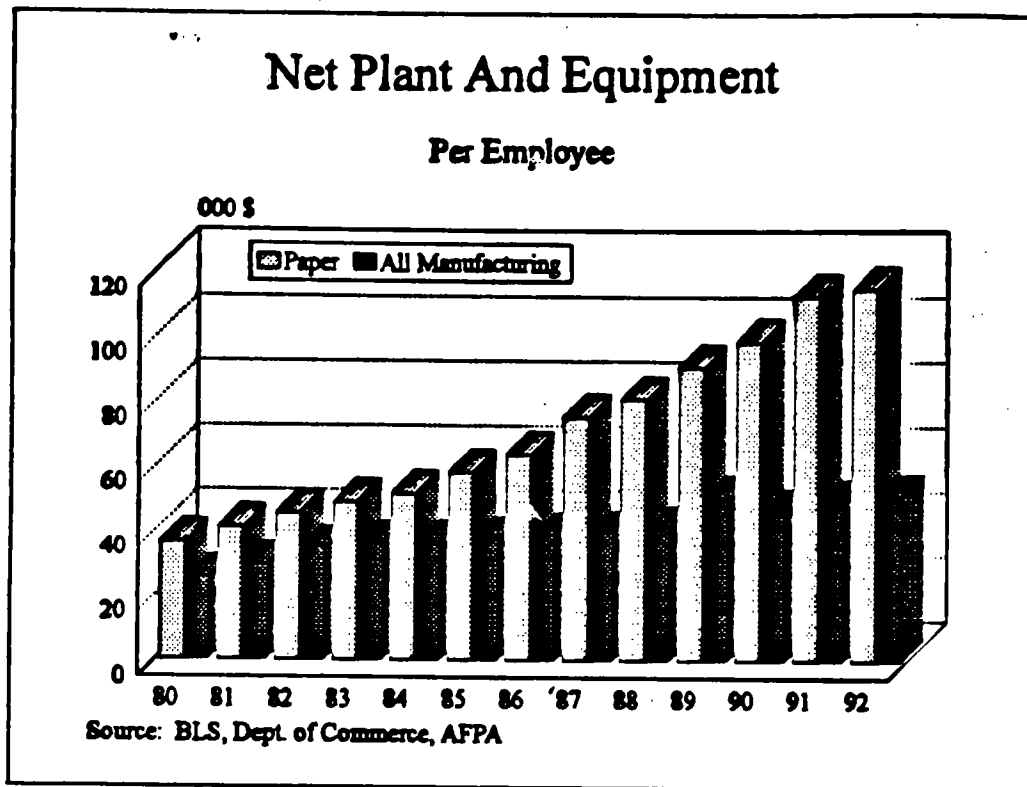


The U.S. is the world's #1 producer of pulp, paper, and paperboard. U.S. mill output of paper and paperboard is greater than the *combined* total of the next four largest producing nations -- Japan, Canada, China and Germany.

The paper and allied products industry employs some 700,000 people in 42 states at 544 mills. Indirect employment accounts for an additional 2,800,000. With sales of \$125 billion, it is among the nation's top ten manufacturing industries.

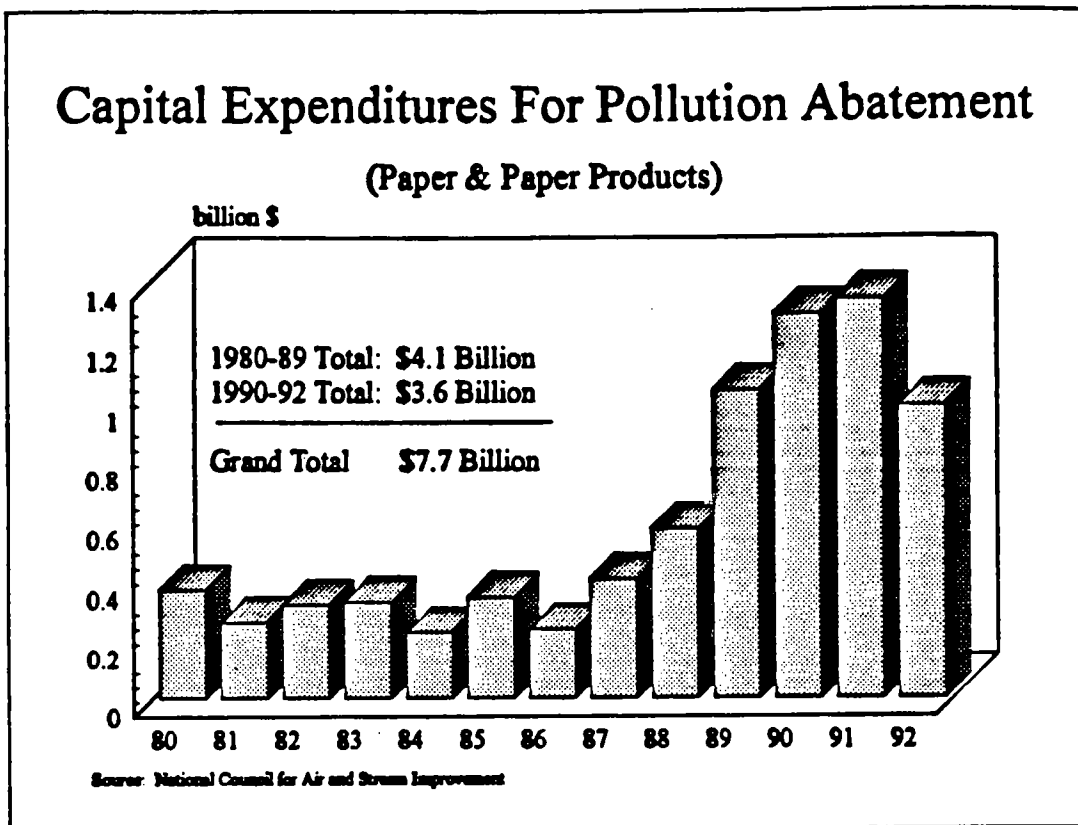
As a result of massive capital expenditures devoted to modernization, streamlining of production and environmental improvements, the U.S. paper industry has succeeded in enhancing its competitive position in world markets and generating export jobs.

Paper Industry Capital Intensity



- The paper industry is the most capital-intensive manufacturing industry in the nation, with each employee being supported by more than \$100,000 of plant and equipment -- twice the average of other domestic manufacturing industries.
- The paper industry has invested almost ten cents of every sales dollar to maintain global competitiveness, improve environmental performance and increase recycling.
- Investing for the future has made the paper industry more efficient -- productivity has risen 47 percent since 1980 -- helping to protect the industry's job base by enhancing its competitive position in world markets.

Expenditures for Environmental Improvements



The industry's capital expenditures for environmental improvements now exceed \$1.0 billion per year, up sharply from a decade ago.

Pulp and paper companies have provided major support for EPA's "33/50" voluntary pollution prevention initiative – being early to join the program and achieve a high level of participation, and meeting the 1992 goals early in many cases.

The industry developed innovative and pioneering technologies to minimize dioxin (an unwanted by-product) in its processes, resulting in a 90 percent reduction in its dioxin generated since 1988 based on current available data. Industrywide, only four ounces are generated annually from pulp bleaching.

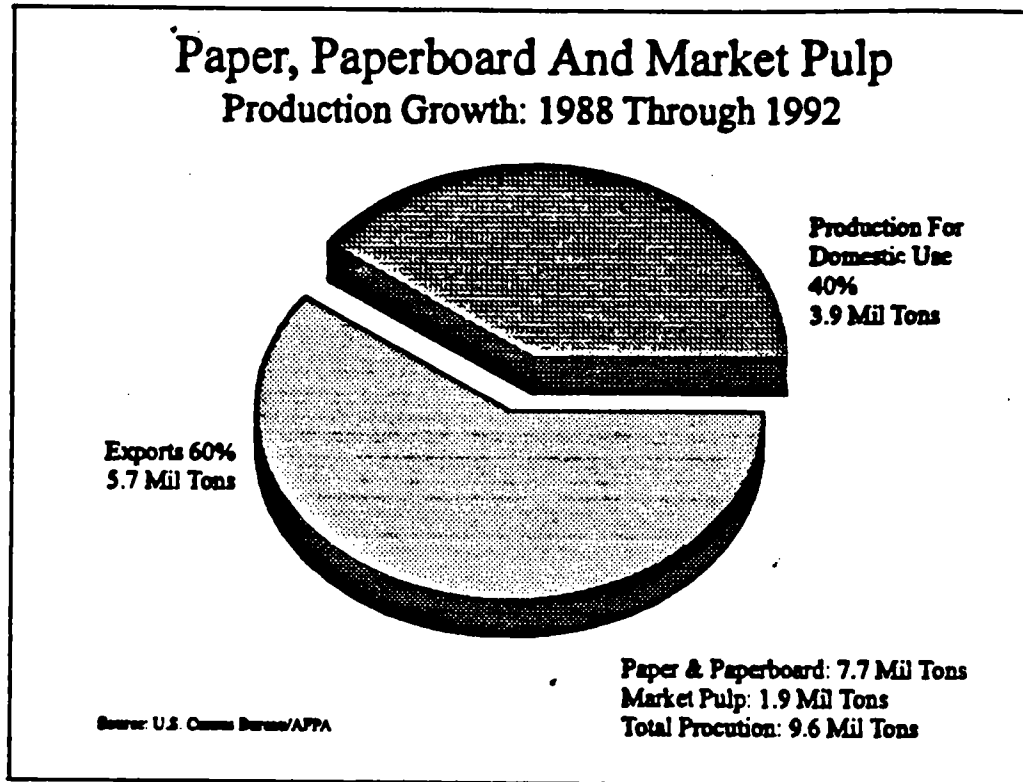
Over the past 20 years, industry efforts have resulted in:

- 70 percent reduction of biological oxygen demand through wastewater treatment;
- 60 percent reduction in water use per ton of product; and
- air controls for particulate removal of more than 97 percent.

Fossil fuel use and purchased energy consumption per ton of paper has been reduced 46 percent over the last 20 years. Cogeneration accounted for 87% of total in-plant electricity generated in 1990.

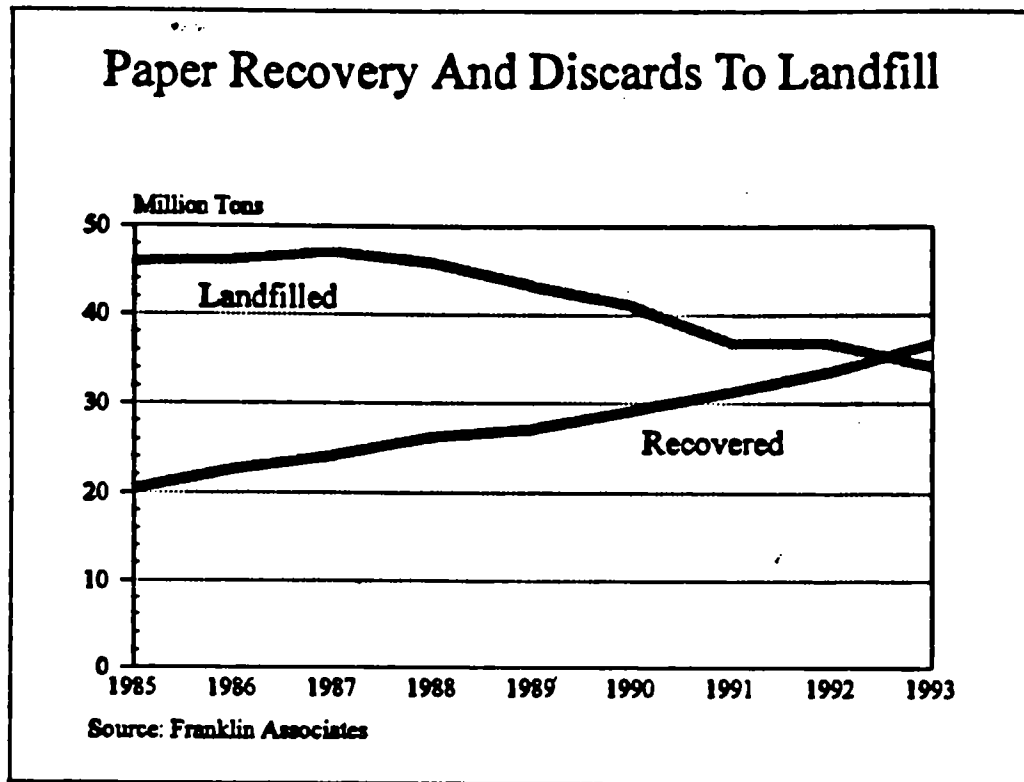
All of these accomplishments took place while the industry increased production by 50 percent.

Spending to Remain Competitive



- Exports have served as the major engine of demand growth for the U.S. paper industry during recent years — 60% of the industry's production growth since 1988 has derived from foreign demand.
- In 1992, the U.S. became a net exporter of paper and paperboard products.
- The industry's global success is the combined result of a world class work force, high and sustained capital investment and a cost-competitive fiber resource base.
- High operating rates are demanded — averaging 92% over the long term. Operating rates of less than 90% cannot be sustained without severe financial consequences.
- Participation in global markets is essential to maintain high operating rates over the business cycle.
- Remaining globally competitive is absolutely essential to the paper industry's continued viability.

Recycling-Related Investments



- The paper industry is approaching its voluntary goal to recover 40% of all paper used in the U.S. in 1995 and expects to announce a new higher target this year.
- This dramatic progress has been expensive. Cumulative plant and equipment expenditures (since 1988) aimed at meeting the 40% goal will total some \$7.5 billion.
- The amount of paper landfilled annually has decreased by 10 million tons since 1988. Over the same period, the amount of paper consumed annually in the U.S. has increased by nearly 3 million tons per year.
- Due primarily to increased paper recycling, the amount of paper recovered in the United States in 1993 will exceed the amount landfilled.
- Nearly 60% of all containerboard and 55% of all newsprint was recovered in 1992.

Cost Estimates for EPA BAT/MACT Control Options

Estimated Costs To Meet EPA Options

	Capital Costs	Annual Operating Costs
Effluent Guidelines	\$5.69 Billion	\$101 Million
MACT	<u>4.20 Billion</u>	<u>705 Million</u>
Totals	\$9.89 Billion	\$806 Million

Source: NCASI

Complying with the effluent guidelines best available technology (BAT) water and maximum achievable control technology (MACT) air options currently being considered by EPA would cost the pulp and paper industry almost \$10 billion in capital expenditures and more than \$800 million a year in incremental operating costs. Estimates were made by the National Council of the Pulp and Paper Industry for Air and Stream Improvement (NCASI).

Costs were calculated for bleached papergrade kraft, dissolving kraft, paper grade sulfite, dissolving sulfite, and unbleached mills.

The underlying technologies for effluent guidelines costs estimates include:

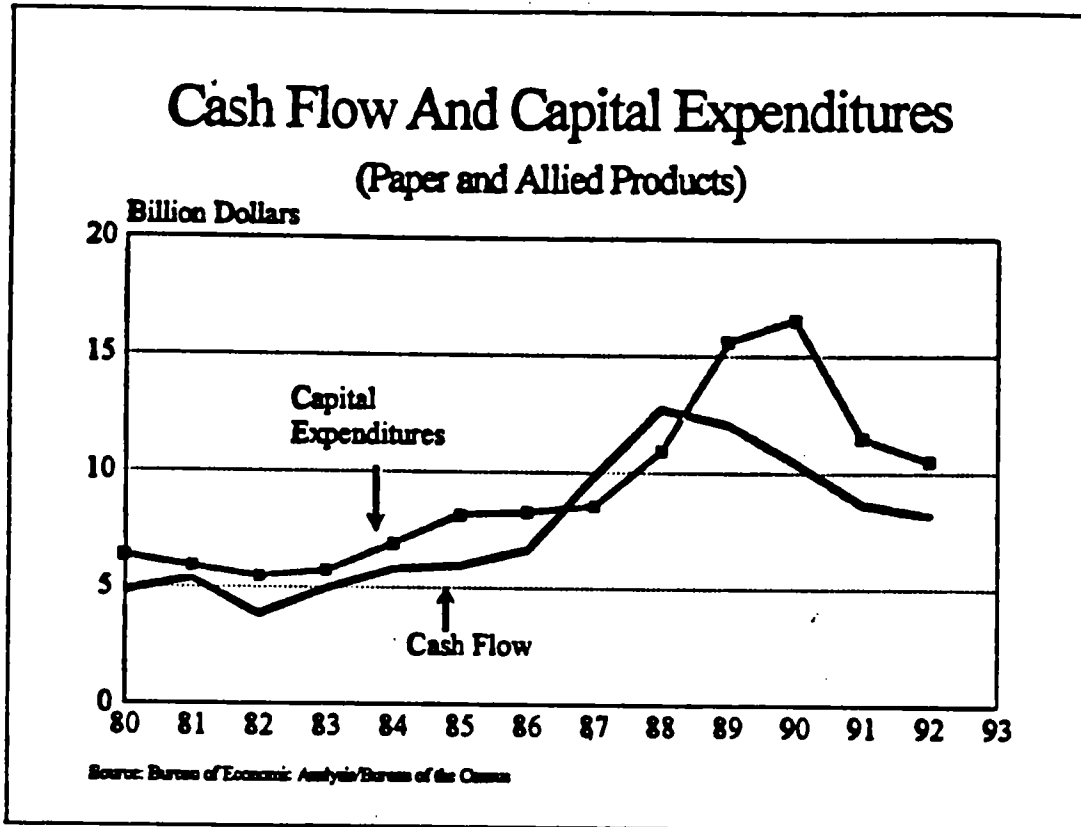
100 percent chlorine dioxide (ClO_2) substitution for chlorine, oxygen delignification, elimination of hypochlorite, and upgrades to recovery boiler capacity.

The technologies for MACT air standards cost estimates include:

Process Sources: Collection and incineration of all pulp mill vents, except deckers; collection and scrubbing of bleach plant vents; and steam strippers for wastewater.

Combustion Sources: Current new source performance standards (NSPS) for existing recovery furnaces, lime kilns, and smelt dissolving tanks.

Capital Availability



Government data show that capital spending by the U.S. paper industry has significantly exceeded cash flow since 1989.

Having just completed a major capacity expansion cycle, the industry must realize the "back end of the cycle" returns and cash flow from those investments in order to be competitive through the next business cycle.

It is critical that policymakers enable the industry to prioritize its capital spending to balance the goals of safeguarding the environment *and* remaining competitive in world markets.

EXECUTIVE ORDER DRAFT LANGUAGE ON RECYCLING SHOULD BE CHANGED

As the White House considers language to include in its Executive Order on Recycled Goods, it is recommended that the key elements of the paper industry's voluntary Printing-Writing Recycled Content Initiative aimed at maximizing recycling be incorporated.

Initiative Highlights

- A printing-writing paper to be considered a recycled content paper must contain a minimum of 50 percent recovered fiber OR a minimum of 10 percent post-consumer and/or processed recovered fiber, measured by fiber weight.

The flexibility of two options enables both large and small paper machines to produce recycled content products.

The minimum 50% threshold recognizes capital investments already made at mostly small mills which currently supply the greatest portion of recycled content papers, allowing these mills to continue to participate.

The minimum 10% threshold creates the opportunity for commodity type grades of printing-writing paper commonly produced on large paper machines at integrated mills (with their own pulping operations) to use recycled fiber where previously it was not used.

Commodity type grades include uncoated and coated grades of paper commonly used in commercial printing; offices; publications including magazines, books, and directories; and advertising. The draft executive order list - copier, offset, forms bond, computer printout, carbonless, file folder and white wove envelope papers - includes only some of the above printing-writing papers. Use of the term "commodity" by the White House in the draft executive order will create broad confusion in the marketplace. Therefore, if the term commodity is to be used, the generally recognized definition of the term as it applies to grades of paper should be adopted.

By establishing minimum thresholds which make it possible for recovered fiber to be used in many grades and in smaller percentages per sheet but in greater volumes of paper overall, the goal of helping to reduce the amount of paper in the waste stream is being achieved.

- The term "processed recovered fiber" is key. Processed recovered fiber is similar to postconsumer fiber in that it comes from paper to which materials such as inks and dyes were added. These materials must be removed in order to obtain the fiber for reuse in a printing-writing paper. Processed recovered fiber includes printer overruns and returned, unsold magazines from the newsstand which are excluded from the RCRA definition of "postconsumer fiber."

Allowing "processed recovered fiber" to count encourages its use by recycled printing-writing mills, giving them needed flexibility in sourcing recovered paper for processing and opening the door to greater investment in facilities to produce recycled content papers. Because the fiber must be processed, its inclusion will still require the kinds of investment that the Executive Order is designed to encourage.

AFPA Printing-Writing Paper Division
August 30, 1993

20 May 1993

ISSUE PAPER ON PRINTING-WRITING PAPERS AND RECYCLING

Overview

The U.S. paper industry has a long and proud history in recycling. In 1992, 33.6 million tons -- over 38 percent of all paper and paperboard used in the U.S. -- were recovered for recycling. Clearly, substantial progress has been made in diverting paper from disposal -- in 1993, more paper will be recovered for recycling than will be sent to landfills. The amount of paper destined for landfills has been reduced 10.6 million tons since 1988, the base year for the industry's unprecedented commitment to recover by 1995 40 percent of all paper used in the U.S. -- a goal the industry expects to exceed by as much as five percent, and to do even more.

An important opportunity exists to further reduce the amount of paper destined for the solid waste stream -- minimize the obstacles that stand in the way of increased utilization of recovered paper in printing-writing papers, a segment that represents 30 percent of total industry output. To that end, the American Forest & Paper Association (AFPA) Printing-Writing Division has launched a Recycled Content Initiative with three basic objectives: 1) to eliminate marketplace confusion over what constitutes a recycled-content printing-writing paper; 2) to use more recovered fiber in printing-writing papers; and 3) to make more recycled-content paper available in the marketplace.

Administration support for the Initiative is the most expeditious way to achieve greater use of recovered paper material in the short term. The current AFPA mill capacity survey shows only four new paper machines are planned for start-up in the next three years. Therefore, modifications which can be made to existing pulp and paper operations to include recycled fibers are the most attractive approach to near term increases in recycling. If operations, especially large paper machines, are changed to use incremental quantities of recovered fiber, sizable increases in total recovered fiber consumption will result sooner. The Administration can also facilitate this process by encouraging greater source separation of clean paper from the solid waste stream as recommended by AFPA, the National Office Paper Recycling Project and others.

The Printing-Writing Recycled Content Initiative

The Printing-Writing Recycled Content Initiative is a voluntary program in which the manufacturers of these products have agreed to establish a recycled content threshold which the product must meet in order to use a recycling symbol. To qualify for the Initiative, participants have established that a product must contain a minimum of 50 percent recovered paper OR a minimum of 10 percent post-consumer/processed recovered fiber, measured by fiber weight.

The 50 percent threshold is an important component of the Initiative because it recognizes mills that have already made changes to use recovered fiber. These smaller, non-integrated mills (i.e. mills generally without on site pulping capability) are equipped with smaller paper machines and are often close to urban areas and, thus, have ready supplies of recovered paper for their operations. These are the mills most responsible for the current use of recovered paper in printing-writing products.

The 10 percent post-consumer/processed recovered fiber option opens the universe for larger integrated mills (i.e. mills with on site pulping capability) to the use of recovered fiber. By enabling these mills to produce printing-writing papers that meet an achievable threshold for recycled content, the Initiative's 10 percent post-consumer/processed recovered fiber option significantly incentivizes investments in increased recovered fiber capacity.

Rationale

If between one-quarter to one-half of the large paper machines (200 or greater tons per day output) producing printing-writing papers were to use recovered fiber at a 10 percent recycled content threshold, the potential incremental use of recovered paper by 1995 would be between 400,000 to 800,000 tons. If the recycled content threshold level were raised to 15 percent, there would be a significant drop in incremental usage to below 200,000 tons. An increase in the recycled content threshold to 20 percent or 25 percent would virtually eliminate increased use of recovered paper in the near term by the existing large printing-writing paper machines. As explained herein, economic operation of these existing, large machines is adversely affected by the addition of external fiber, such as deinked or processed fiber, for which the machines were not designed. In short, the higher the percentage, the fewer machines capable of producing a marketable recycled content product.

Key factors affecting the greater use of recovered paper by printing-writing paper mills are: 1) supply of recovered fiber, 2) technology, 3) quality and performance requirements, and 4) economics.

1) Supply of Recovered Fiber - Mills must have a reliable supply of quality recovered paper and the flexibility to use it.

2) Technology - Historically, large mills were built to use primary wood pulp as their source material. Because pulping is a continuous and energy-intensive operation connected to the paper machine, these existing mills cannot efficiently substitute large percentages of recovered fiber over a sustained period of production without incurring excessive performance deterioration and operating cost penalties. Imbalances in energy use, waste treatment and material flows are created which require physical changes to the mills that take significant capital investment and long periods of time to implement.

3) Quality & Performance Requirements - The operating parameters necessary to produce a high-quality sheet of paper on a modern high-speed machine have little margin for variations in feedstock contaminant levels. Greater levels of recovered fiber usage result in increased exposure to contaminants. The cost penalties of a contaminant-induced breakdown on a 3,000 foot-per-minute, 200 inch-wide paper machine are enormously greater than on a smaller 200 foot-per-minute, 60 inch-wide machine.

4) Economics - Existing modern paper mills represent a \$300-\$500 million capital investment, on average, and support a considerable direct and indirect employment base. The mills are balanced among pulp production, energy recovery and paper production. Many are dedicated to producing commodity papers. The economic viability of these commodity mills depends on low cost, high volume, consistent quality production, enabling these mills to compete in the global marketplace. Printing-writing papers are the industry's second largest dollar-valued export. Any cost increase is a serious competitive problem for these commodity mills. Since the largest single cost of paper production is fiber, a substantial increase can quickly make an operation noncompetitive. The costs of significantly under-utilizing the pulp operation are prohibitive. Furthermore, use of large amounts of recovered paper may require increased reliance on fossil fuels and, therefore, additional pollution-control equipment and purchased energy costs.

Conclusion

Since a great deal of private sector buying takes its lead from EPA's procurement guidelines, it is vital for the Administration not to set unrealistically high recycled content levels for printing-writing papers. Too high a level will discourage investments in capacity to use recovered paper or make the output economically uncompetitive. With imports already at 15 percent of U.S. printing-writing consumption, more foreign production can easily displace noncompetitive U.S. output, costing American jobs.

In only Canada and the U.S. is the term "post-consumer" used to define a segment of recovered paper. In Europe, for example, all paper from the printing/converting process is considered to have been used by consumers, significantly reducing foreign producers collection/usage costs. With no test available to determine the recycled content of paper, how will the U.S. government, let alone a customs agent, ensure that imports meet the exact same definitional constraints placed on U.S. producers?

By supporting the Printing-Writing Recycled Content Initiative levels in EPA's federal procurement guidelines, the Administration and the U.S. industry can move toward a common goal as partners, confident that much greater use of recovered paper in the printing-writing paper sector will be achieved and that a globally competitive U.S. industry will be able to continue growing its markets and work force.

a:whstalk.pt3

**Draft Presidential Executive Order on Federal Recycling
*Totally Chlorine-Free***

- I. There is no full-scale production of TCF pulp in U.S. bleached kraft mills. The practical effect of the Executive Order (EO) will be the widespread, increased purchase of imported paper at the expense of U.S. production and jobs. There has been no cost/benefit analysis of the impact of this action, nor substantiation that TCF mills and products are superior to modern conventional mills using enhanced process modifications and pollution prevention techniques.**
- The mere mention of TCF, even as a goal, in the Executive Order is a cause of concern because of the historical linkage under which the purchase behavior of the private sector toward printing-writing papers closely follows the federal government purchase "guidelines" regarding recycled content. A TCF "goal" will be accepted and implemented as a "guideline" for all paper grades.
 - To capitalize on demand created by the EO, Scandinavian producers, whose fiber base for TCF pulps is much different than that of the U.S., will rush into the U.S. market, fill their order books and create a stronger overall presence within our attractive domestic market, displacing U.S. products and jobs.
 - Given the United States' strong reliance on southern pine and the kraft pulping process, the U.S. pulp and paper industry cannot immediately mount a counter offensive to reclaim lost domestic markets, even if the financial resources were available.
- II. The environmental impact of TCF is largely unknown, and there is a possibility the impacts may be greater than had been assumed.**
- Mills employing modern conventional bleaching have been enhanced with extensive process modifications and pollution prevention techniques. Products from conventional bleached mills actually have lesser concentrations of chlorinated compounds such as dioxins than common everyday materials.
 - The environmental effects of TCF processes have not been adequately evaluated. Scientific comparisons of bleaching process options made by the Pulp and Paper Research Institute of Canada have revealed concerns with some TCF effluent discharges.
- III. TCF is not proven technology for U.S. bleached kraft mills.**
- EPA Administrator Browner has recently acknowledged that TCF technology is "not fully developed," and that "no kraft mills have succeeded in making high-brightness pulp from southern softwoods without using chlorine."

- "Despite the widespread research and development, and some successful production runs, the consensus [from the Worldwide Conference on Non-Chlorine Bleaching at Hilton Head, SC, March, 1993] was that TCF bleaching has not gained the status of proven technology. Although several mills are producing TCF grades of bleached kraft pulp for specialized niche markets, there is no TCF process available which can produce, at competitive cost, high brightness market pulp, with equivalent physical properties to conventionally bleached pulp, from chips with a range of quality that permits companies to use all available forestry residuals."
- TCF is not one process, rather a wide variety of options -- oxygen, ozone, hydrogen peroxide and enzymes. To date, the kraft pulps of this process are less bright, have a higher dirt count, produce a weaker papermaking fiber and are more costly to produce.

IV. The limited TCF production which is occurring is driven by local factors; it is market forces that are driving the demand. TCF capacity must be differentiated from TCF production; capacity is not a surrogate for demand.

- The first North American mill to produce TCF pulp was shut down and offered for sale when its owners found customers "unwilling and unable to compromise on product quality."
- The two U.S. mills which are currently championing TCF are doing so for commercial reasons. One is a sulfite mill that is not representative of the processes or products produced by 95% of the U.S. industry's bleached mill output. The only U.S. kraft mill to announce a totally chlorine-free pulp advertises that it will not be in full production until well into 1995, and that mill is a producer of pulp, not a maker of paper. This mill is the only mill in the lower forty-eight states not to have made the very significant investments necessary to install secondary treatment.
- The only market with significant interest in TCF is Germany -- a market of historical and particular concern to Scandinavian producers.
- TCF mills produce TCF only intermittently. It is important to distinguish between TCF capacity and TCF production; the latter is more related to actual market demand, which continues to fall far short of supply. For example, the manufacturer most committed to TCF in Europe (Sodra, Sweden) continues to devote only one-third of its capacity to TCF, largely because the market penalty (about 15% higher) and end-user concerns have limited demand.

V. It would be inequitable for the federal government to force U.S. companies down a different (and very capital intensive) path than that under which they were previously regulated.

- EPA does not find TCF to be the best available and economically achievable technology for U.S. bleached kraft mills.
- For decades, the U.S. government has regulated its pulp and paper industry to utilize secondary, biological treatment. As a result, the industry's mills meet the world's most stringent overall environmental regulations.
- Our government should not now break faith with this history and force the U.S. pulp and paper industry to a new standard, which is an outgrowth of a different pollution control strategy employed in Scandinavia.
- In Scandinavia, governments did not earlier require the installation of secondary biological treatment, which has been employed by U.S. mills since the 1970's. In now playing "catch-up" with regard to environmental controls, some Scandinavian competitors tout processes which do not use chlorine compounds but continue to avoid secondary treatment.
- U.S. permits are on a "not to exceed" basis, a much more stringent standard than the Scandinavian use of "average."

VI. TCF is counterproductive to increased use of recovered materials.

- Paper from conventional bleached pulps are convenient for recycling because the fibers are strong and can be recycled numerous times; TCF fibers are less strong.
- TCF processes do not yet allow efficient use of softwood forestry residuals to the extent achievable with modern conventional bleaching. Since one quarter of the fiber used at U.S. paper and paperboard mills comes from wood residues, the widespread application of TCF would result in an increase in the volume of residuals requiring solid waste disposal, and increased demand for roundwood.
- Finally, there is no commercially available method to remove chlorides and other chlorinated compounds from any paper. No paper products can be literally chlorine free.

**Draft Executive Order on Federal Recycling
Purchase Guidelines for Recycled Content Printing-Writing Papers**

I. While a higher content level of recycled fiber per printing-writing sheet of paper may appear better, a 10 percent minimum content level per sheet will result in greater consumption and diversion from landfills of recovered fiber.

- A 15% minimum post-consumer content standard for paper produced by commodity machines at vertically integrated mills will prevent many producers from making capital investments in expensive, specialized equipment to process recovered fiber.
- Getting commodity machines involved in recycled content is the only way to markedly increase recycling in the printing-writing grades. Commodity machines represent two-thirds of the installed printing-writing capacity, and are the most cost efficient and the least involved in the current manufacture of recycled content printing-writing papers. Most current recycled content printing-writing papers are produced on smaller, less efficient machines. The industry's generally understood definition of a "commodity paper machine" is based on the size of the machine (76,000 tons/year and larger), and both uncoated and coated papers are made on these machines.
- At 15% minimum post-consumer content, only 6-12% of the total commodity machine capacity is estimated to convert in the near term.
- World-class, vertically integrated mills are "balanced" for pulping, bleaching, energy, waste combustion, etc., and more than 10% post-consumer content under-utilizes these various mill processes, uncompetitively raising costs.
- If a "50 percent OR 10 percent" minimum content approach for all printing-writing grades cannot be embraced, language including all coated and uncoated free sheet and groundwood commodity grade papers as qualifying for the lower number should be included in the Executive Order.

II. Requiring specific higher recycled content standards for future years in the Executive Order is a disincentive.

- Some producers willing to make the necessary recycling investment because they feel they can "stretch" to the minimum content level may opt not to go forward out of concern that they cannot see how to reach the higher levels, which are already "etched in stone."
- The EPA Administrator already has the authority to review the standards at his/her discretion. In fact, that process is currently underway.

- As minimum content levels are moved higher, a grade-by-grade differentiation must be considered because some grades will be better able to contain higher percentages of recovered fiber than others. Therefore, EPA Administrator flexibility in designating review times and recommending content levels based on real performance will achieve greater recycling than one "etched in stone" number that applies to all grades.

III. Regardless of what increases overall paper recycling, at least 90% of that increase will come from the post-consumer waste stream.

- More than 90% of all paper recycling gains since 1988 and into the foreseeable future will be "post-consumer," since virtually all pre-consumer recovered paper grades are already in use.
- This fact is inescapable regardless of how terms are defined, yet impractical definitions can serve as obstacles and reduce the rates of increase for overall paper recovery and recycling.

IV. The AFPA Printing-Writing Recycled Content Initiative was developed to maximize overall recovery and recycling of printing-writing grades.

- Under the Initiative, manufacturers have the flexibility to produce and customers the option to buy papers meeting either a minimum threshold of 10 percent post-consumer and/or processed recovered fiber OR a minimum threshold of 50 percent recovered paper fiber, based on fiber weight.
- The threshold minimums are designed to encourage:
 - the production of as many grades of recycled content printing-writing paper as possible, and
 - use of the greatest amount of recovered fiber in the production of printing-writing papers overall in the shortest period of time.
- The term "processed recovered fiber" recognizes the need for sufficient supplies of minimally contaminated and economically available recovered fiber to run through processing facilities to recover the fiber for reuse in printing-writing paper manufacture. Specialized processing is required of these papers to remove inks, dyes, waxes and water insoluble adhesives, etc. before the paper can be used in the remanufacture of recycled content printing-writing papers.

**Draft Presidential Executive Order on Federal Recycling
"Environmentally Preferable" Products and Services**

- I. The "environmentally preferable" section of the draft White House Executive Order goes well beyond the scope of the March 1992 Office of Federal Procurement Policy (OFPP) policy letter without the benefit of public comment.
 - The "*environmentally preferable*" language used in the draft White House Executive Order "refers to products or services that are less harmful to human health and the environment..."
 - The inclusion of "human health" in this definition expands the category beyond that which was available for public comment in the March 1992 draft policy letter.
 - While the March 1992 draft policy letter was available for public comment and review, the Executive Order was not made available.
- II. The Executive Order, in its current draft, will dictate manufacturing practices -- in the case of the pulp and paper industry totally chlorine-free (TCF) -- which is directly contradictory to the language of the OFPP 1992 policy letter.
 - The OFPP specifically states, "the Policy Letter is not intended to dictate manufacturing nor copying practices,"
- III. Many industries are concerned about reliance on Life Cycle Assessment (LCA) methodologies to determine "*environmentally preferable*" products.
 - There is widespread acknowledgement that methodologies for life cycle analysis are not adequately formulated for use in determining "*environmentally friendly*" or "*environmentally preferable*" products and services, especially as they relate to human health.
 - In *Green Report II*, the State Attorneys General state, "Although product life assessments or cradle-to-grave product analyses are expected to be extremely useful for evaluating the overall environmental effects of various manufacturing processes and products, the methodology for this type of assessment has not yet been fully developed."
 - The Federal Trade Commission stated in the agency's *Guides for the Use of Environmental Marketing Claims*, "These guides do not address claims based on a 'lifecycle' theory of environmental benefit. Such analyses are still in their infancy and thus the Commission lacks sufficient information on which to base guidance at this time."
 - EPA, in its February 1993 *Life-Cycle Assessments: Inventory Guidelines and Principles* states, "Currently there is no single correct way to conduct a life-cycle assessment."

August 12, 1993
American Forest & Paper Association

TALKING POINTS ON INITIATIVE AND EXECUTIVE ORDER

August 31, 1993

BACKGROUND

Early in September, President Clinton is expected to sign an Executive Order covering, among other provisions, federal guidelines for purchasing printing-writing papers, defining terms and mandating specific recycled-content percentages for the various grades of printing-writing papers purchased by the United States government.

There has already been national media coverage of the draft document. As a paper manufacturer and a member of the Printing-Writing Division of the American Forest & Paper Association, you may be asked how this Executive Order will affect your company and how it will affect the Recycled Content Initiative. The following talking points clarify how customer specifications, such as those in the Executive Order, fit in the broader context of the Recycled Content Initiative.

TALKING POINTS

- The Printing-Writing Division of AFPA commissioned research to determine what customers and others knew about recycled printing-writing papers, and found widespread confusion in the marketplace. Acting on the research results, printing-writing paper manufacturers created the Recycled Content Initiative to accomplish three goals: clarify what constitutes a recycled-content printing-writing paper; meet demand for these products in the marketplace; and ultimately reduce the amount of paper in the wastestream. The Initiative, announced in March 1993, will accomplish these goals in a way which takes into account existing equipment capabilities and operations in the industry.
- Under the Initiative, printing-writing paper is considered to have sufficient recycled content to be labeled "recycled" if it contains at least 50 percent recovered fiber OR 10 percent post-consumer and/or processed recovered fiber. These thresholds create a voluntary base level for participating companies.
- The general idea of the Initiative is that less will be more. Through its workable minimum thresholds, the Initiative makes it possible to use recycled fiber in the widest range of printing-writing papers. Thresholds that require less recycled content per sheet of paper will bring more papermaking machines and processing equipment on line, which will, in the aggregate, lead to the use of more recovered fiber. The Initiative will divert more paper from the waste stream than narrow definitions or "quick-fix" high recycled-content levels could.

-- more --

- Under the federal guidelines, only post-consumer materials will qualify for the minimum content threshold of recycled-content paper. "Post-consumer" means paper products which have been used in a certain way or by a certain user -- a magazine which has been read, a piece of printed paper which has been written on or read, etc. This limits manufacturers' incentives to recover printed paper from all possible sources and makes collection and processing more costly, and ultimately results in higher costs for recycled-content papers.

On the other hand, the Initiative encourages use of post-consumer and/or processed recovered fiber, especially on the largest paper machines, at minimum threshold levels or higher for printing-writing paper, to maximize diversion of paper from the waste stream. "Processed recovered fiber" includes post-consumer and other printed papers which may not have been read, such as an unsold magazine returned from the newsstand. These products are collected, processed and returned to the papermaking process. "Recovered fiber" is from any paper generated beyond the papermaking process, including unprinted scrap from converting and finishing operations. All these definitions include the equivalent recovered fiber for cotton-fiber papers.

- The Executive Order specifies minimum recycled-content levels only for printing-writing papers purchased by the Federal government. Other purchasers of printing-writing papers may establish specifications for recycled-content paper, just as the federal government has done through the Executive Order. The Initiative, however, establishes minimum recycled-content thresholds applicable to all types of printing-writing paper, so all purchasers will know what they are buying . . . and will have a greater selection and volume of recycled-content papers to meet their needs.
- The proposed executive order also sets different minimum content standards for certain papers, even though there may be no basis for distinguishing between them from a manufacturing or use standpoint. Two grades of paper made on the same paper machine must meet different standards even though the technology and economic challenges to adding recycled fiber are the same.
- Paper manufacturers want to offer customers a choice of products. They are also committed to increasing recycling. Using the minimum thresholds for recycled content established in the Initiative, printing-writing paper manufacturers can continue to provide customers a wide array of recycled-content products from which to choose.

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UNITED PAPERWORKERS INTERNATIONAL UNION

WAYNE E. GLENN
Office of the President

August 5, 1993

President Bill Clinton
The White House
1600 Pennsylvania Avenue, NW
Washington, D.C. 20500

Dear Mr. President:

When I wrote you July 26, I expressed my union's concern that a proposed executive order, originally developed by your environmental policy staff to regulate and encourage the federal government's use of recycled paper, contained provisions related to government purchases of totally chlorine-free paper (TCF).

Since then, I have had a chance to review a draft of that order. Sec. 503 of this draft would require each federal agency under the control of the executive branch to set specific goals for the amount of TCF paper it plans to purchase by 1995. I would like to know where they will get the paper? As of now, there is only one small sulfite mill in the entire United States that can produce TCF paper. By 1995, only one other mill in the U.S. will be producing TCF pulp. If the agencies were forced to observe the TCF goals in this proposed order, *they would have to buy paper from foreign producers--if they could buy it at all.*

This is not my only concern. The recycling issue is entirely separate from the question of chlorine vs. elemental chlorine-free (ECF) vs. TCF. Even if it were appropriate to begin encouraging the use of TCF paper, an executive order on recycling is not the way to do it.

The chlorine-bleaching issue is a subject of intense controversy, both in the scientific community and in the political arena. Whatever the environmental merits of switching to ECF or TCF, there is no question it will cost the paper industry billions of dollars to make such a change. It is not simply a matter of taking chlorine out of the bleaching pot and putting ozone in. It is a matter, rather, of changing significant components of bleaching processes that as a whole can cost hundreds of millions of dollars.

Again, an issue this significant for the pulp and paper industry should not be decided through an executive order, particularly one designed to address a different problem. The chlorine-bleaching issue needs to have a public airing on its own merits before any executive or legislative action is taken.

Page Two (2)

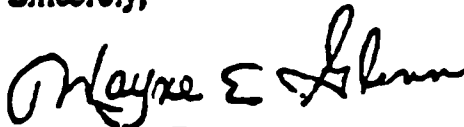
When I wrote to you in July, I expressed my concern that we had received no notice of this proposal until it was within days of being finalized. This issue is of direct and immediate concern to the vast majority of our 225,000 members. There is no question we should have been consulted much earlier in the process of designing the proposal. There was a failure to communicate here. Your administration needs to be open to workers, not closed.

Therefore, I respectfully request you remove all references of any kind to TCF pulp or paper from the proposed executive order on recycling. I ask further that, if the federal government wishes to set goals and standards related to the purchase of chlorine-free paper, it do so only after a full public hearing involving all points of view on the issue carried out in conjunction with a thorough cost-benefit analysis by the OMB.

I would be pleased to meet with you and appropriate members of your staff at the earliest reasonable time to discuss this issue in more detail. It is of crucial importance to the pulp and paper industry, and to our members who have worked to contribute to the success of your administration.

Thank you for the opportunity to share these comments. And again, best wishes for your continued success.

Sincerely,



Wayne E. Glenn
PRESIDENT

WEG:pme

cc: UPIU International Executive Board



UNITED PAPERWORKERS INTERNATIONAL UNION

WAYNE E. GLENN
President

JAMES H. DUNN
Secretary - Treasurer

July 26, 1993

President Bill Clinton
The White House
1600 Pennsylvania Ave., NW
Washington, DC 20500

Dear Mr. President:

I have been informed that a proposed Executive Order on federal procurement of recycled paper will include some form of requirement for the federal government to purchase chlorine-free paper. This concerns me a great deal.

If the contents of the proposed order are such that it ignores the economic and technological realities of this industry, the price will be high. Only two mills in the U.S. are able to produce paper without using chlorine chemicals. This means the order could force the government to rely on imports to meet its needs for paper. Hundreds, perhaps thousands of jobs could be shipped overseas. Dozens of small and medium-sized communities throughout the United States could be damaged, perhaps fatally.

The delegates to our 1988 Convention called for the phase-out of harmful chemicals in the pulping process. We believe this must be done in ways that preserve our jobs and the nation's industrial base, as well as protect the environment. I urge you to very carefully consider whether or not your order, as presently proposed, meets this criterion.

It is impossible for me to comment in more detail since neither I nor my staff have been informed of the details of this proposed order. It troubles me that a policy move which could affect so many of our members and determine the direction of the American pulp and paper industry for the next decade or longer was not brought to my attention sooner. This is a policy issue which needs and deserves more, not less, than the usual level of public input. And again, let me emphasize, this is no time to even appear to be shipping America's industrial jobs overseas. Buy American should be the theme of our federal government.

I look forward to the opportunity to speak with you on this issue. If I can be of any additional assistance, please let me know.

My best regards for your continued success.

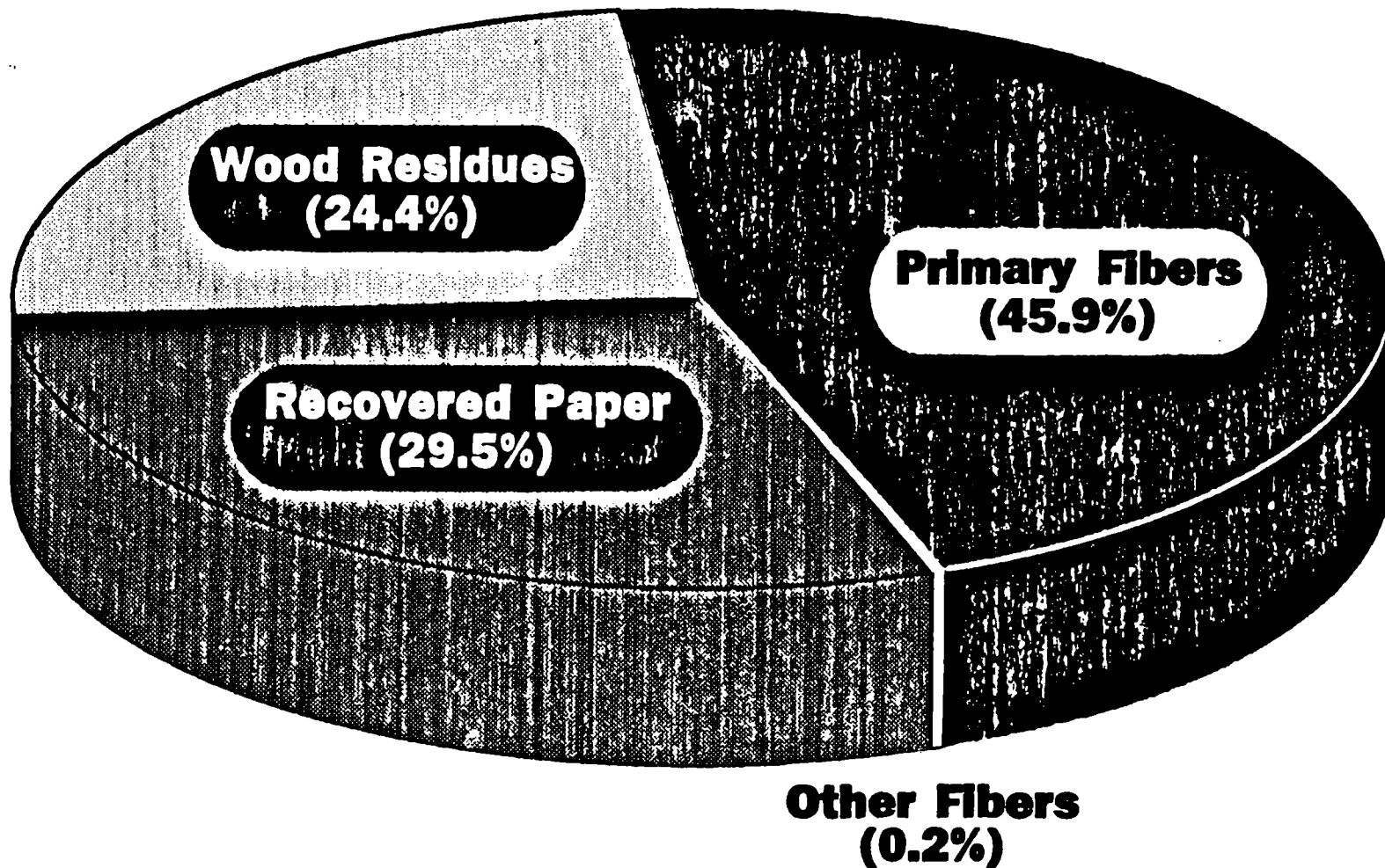
Sincerely,

Wayne E. Glenn
Wayne E. Glenn
President



FIBER USED AT U.S. PAPER AND PAPERBOARD MILLS

1992





UNITED PAPERWORKERS INTERNATIONAL UNION

WAYNE E. GLENN
President

JAMES H. DUNN
Secretary - Treasurer

July 26, 1993

Carol M. Browner, Administrator
U.S. Environmental Protection Agency
401 M Street SW, Mail Code A-100
Washington, DC 20460

Dear Ms. Browner:

It has come to my attention that the rules EPA plans to propose this year to regulate the liquid effluent from pulp mills may severely impact a number of the mills where our members are employed. I have in fact been informed that some mills will be unable to operate under the new guidelines.

I cannot emphasize too much the need for any regulation EPA issues to be consistent with the overall health of one of America's most successful industries. It's an industry that is at the economic core of many of our small towns and cities. If it is true that EPA's new regulations will force otherwise economically-viable pulping operations to close, the potential job loss will be an absolute catastrophe for dozens of these communities.

The UPIU, which represents 225,000 members, believes in safe, healthy communities and safe healthy jobs. In 1988 we called for the phase-out of harmful chemicals in the pulping process. We believe this can be done, when needed, in a way that both preserves jobs and protects the environment.

For example, the timing of mandates that force changes in the way pulp is bleached—if these are unavoidable—should be synchronized with the life-cycles of the bleaching plants. The EPA needs to carefully consider whether there is a real, as opposed to a purely political, need to limit AOX emissions to less than 1.5 kilogram per ton of production. Some exceptions need to be made for older mills, which may have difficulty complying with any mandate that requires substantial new investment.

Whatever happens, it is clear that regulations requiring substantial new investment will drive up the cost of domestically-produced paper. This in turn will tend to give foreign competitors of our U.S. producers, some of which are not likely to be subject to these stringent mandates in the near future, a price advantage. It is not fair to regulate the content of American production, when imports are not required to meet the same standards. I cannot believe it is the EPA's intent to drive our pulp and paper industry off-shore.

Therefore, I respectfully request EPA to reconsider both the content and the timing of its new proposals. Regulations that respect the economic, technical and public-health realities associated with pulp and paper mills can contribute to a viable, clean and growing industry. Regulations that do not take these realities into account will severely damage the industry.

I look forward, in the near future, to the opportunity to discuss these issues with you and your staff in more detail. Thank you very much for your time and consideration.

Sincerely,

Wayne E. Glenn
President

cc: President Bill Clinton
Vice President Al Gore

FEDERAL RECYCLING, ACQUISITION AND USE OF ENVIRONMENTALLY PREFERABLE PRODUCTS AND SERVICES

Fact Sheet

Recycled Printing and Writing Paper Content Standards

On Earth Day President Clinton called for an Executive Order directing every agency of the federal government to increase their efforts to buy and use recycled products. A section of the Executive Order calls for new minimum content standards for recycled printing and writing paper and requires agencies to buy only recycled paper. Below are a few facts regarding the standards.

Message

- o The new content standards will create a solid market for recycled printing and writing paper containing postconsumer material, providing incentives for the paper industry to invest in new technologies which utilize high quantities of recyclable material diverted from landfills.
- o Industry investment in new technologies and demand for recyclable materials will create many new jobs in a number of different sectors of the economy.
- o Demand for recyclable materials will relieve the burden on cities, who cannot find markets for these materials, and reduce the need to build new landfills and incinerators.
- o Recycling conserves energy and preserves precious natural resources.

Paper Production

- o According to the American Forests and Paper Association (AFPA), over 55% of total paper production in the U.S. is printing and writing paper.
- o EPA estimates that the federal government accounts for 2% and state and local governments account for 5% of the national paper market.
- o EPA's previous paper procurement guideline was issued in June of 1988 with implementation in June of 1989. These guidelines require 50% of the fiber contained in printing and writing papers purchased by the Federal government be made from recovered materials, if the paper is available at a reasonable price.
- o The 50% wastepaper definition proved to be a barrier to large paper mills wishing to make recycled printing and writing paper. In addition, mills primarily used preconsumer waste in the production of this product, including mill scraps and sawdust. Very little recycled material was diverted from the waste stream to make this 50% recycled paper.
- o Recognizing that these standards were weak, many state governments adopted strict standards in an effort to include postconsumer waste in recycled printing and writing paper. States such as Arizona, California, Illinois, Kentucky, Minnesota and Rhode Island require 50% recycled paper and at least 10% postconsumer waste.

New Markets

- o Cities, counties and towns across the country are searching for markets for their collected recyclable paper. In an attempt to boost the market for recyclable materials, OEP decided to seriously consider the industry's proposal to replace the 50% wastepaper standard with a lower percentage postconsumer standard to ensure that larger mills would be able to make a low cost recycled printing and writing paper.
- o The industry estimates that about 75% of its capacity to make high grade commodity papers is at mills that contain large, fast, state-of-the-art paper machines.

The Standards

- o The new standards require Federal agencies to procure high grade recycled printing and writing paper containing 15% postconsumer waste (pcw) by 1994, 20% pcw by 1996 and 25% pcw by 2000. By removing the 50% wastepaper standard we ensure that larger mills will begin to utilize high quantities of postconsumer waste in their production of printing and writing paper.
- o Non-commodity or lower grade papers must also meet the above content standards but also include 50% wastepaper. This preserves a market for small mills where these papers are made.
- o The AFPA estimates that a majority of its large mills can easily make a recycled printing and writing paper containing at least 10% postconsumer material/processed recovered fiber. Though unpredictable, the EPA estimates that a number of large recycled paper printing and writing mills can produce a 15% pure postconsumer paper.
- o As the large mills begin to produce this new recycled paper prices will drop, removing an additional barrier to agencies wishing to buy this product. The costs to produce 50% total recycled content paper at a large commodity mill was almost 30% higher than the production of virgin. The cost to produce 15% postconsumer content will only be 9 to 12% higher.

Paper as Solid Waste

- o According to EPA, paper and paper products constitute 37.5% of the municipal solid waste stream. A study conducted by EPA revealed that paper and paper products represent approximately 77% of office wastes in a typical federal agency.
- o EPA estimates that 20 million tons of recyclable printing and writing paper are disposed of annually. Current federal government procurement of recycled printing and writing paper diverts less than 2,000 tons of postconsumer materials from landfills. If all printing and writing paper purchased by GSA and GPO met the proposed 15% postconsumer materials content standard, approximately 55,000 tons of postconsumer materials would be used. Assuming that state and local governments and 20% of private sector purchases adopt the 15% standard, over 1 million tons of postconsumer material will be used.

FEDERAL RECYCLING, ACQUISITION AND USE OF ENVIRONMENTALLY PREFERABLE PRODUCTS AND SERVICES

Questions and Answers

Recycled Printing and Writing Paper Content Standards and Total-Chlorine-Free Paper Goals

Recycled Paper Content Definitions

Q. Why does the Executive Order focus on recycled content standards for printing and writing papers?

A. Currently, despite the fact that EPA has established recycled content standards for printing and writing papers, the Federal government is not purchasing appreciable quantities of many kinds of printing and writing papers. For example, the General Services Administration reports that, last year, less than 8 % of xerographic papers and none of the computer paper purchased by the Federal government contained recovered materials.

- o The principal reason that little or no xerographic and computer papers containing recovered materials were purchased is that they cost substantially more (between 25 and 33 % more) than comparable virgin papers.

Q. Why do recycled printing and writing papers cost more than virgin papers?

A. Not all recycled printing and writing papers cost more than virgin printing and writing papers. There are many printing and writing paper products (e.g., text, cover, bond papers) that cost about the same whether they contain recovered materials or not. This is because they are "specialty" grades of papers that are manufactured on smaller paper machines that compete with one another. Because of the nature of these "specialty" papers, they are not mass produced on the larger, faster machines used by industry to produce so-called commodity grades of papers (e.g., xerographic, off-set printing, computer, and forms papers).

At the present time, commodity grades of printing and writing paper containing recovered materials cost more than commodity grades made from virgin materials. This is because commodity grades containing recovered materials are currently produced on small to medium sized paper machines at non-integrated paper mills (mills that do not have the ability to convert wood chips or whole trees into pulp and then into paper; these mills purchase pulp made at other mills and produce paper from the purchased pulp). These small to medium sized machines are less efficient than the large, fast machines used to make commodity grades from virgin materials.

- o Industry estimates that about 75 % of its capacity to make commodity grades of paper (e.g., xerographic, computer, off-set printing, and forms papers) is at mills that contain large, fast, state-of-the-art paper machines. These mills are fully integrated and rely on wood chips or whole trees as their exclusive raw material source. They take advantage of economies of scale and can make paper at a lower cost than the small to medium sized mills where recycled xerographic and other commodity grade papers are made.

Q. What is the Executive Order trying to accomplish?

A. The purpose of the Executive Order, among other things, is to provide an incentive for mills with the larger, faster paper machines to use recovered materials, not just virgin materials, to make paper. This will provide markets for paper recovered from the municipal solid waste stream and ultimately result in substantially lower prices for commodity grade papers that contain recovered materials.

o For paper recycling to flourish, it will be necessary for mills to use recovered paper in addition to virgin materials on their larger, faster paper machines. EPA's current paper guideline requires that 50 % of the fiber contained in printing and writing papers purchased by the Federal government must be made from recovered materials, if the paper is available at a reasonable price.

o We have found that this 50 % content standard is a barrier for the large, integrated mills where the major portion of commodity grade papers are made. To meet this standard would require that the mill close down one-half of its pulping operation and purchase an equivalent amount of pulp made at a deinking mill from recovered paper. We estimate that this would increase production costs by at least 30 %, with no likelihood that the increased production costs could be passed on to customers. This would be a bad business decision and one that the industry has appropriately decided not to make.

Q. How does the Executive Order provide an incentive for the larger paper machines to begin using recovered materials to make paper?

A. The Executive Order establishes content standards for commodity grade printing and writing papers that are substantially more modest than the 50 % level currently contained in EPA's paper procurement guideline. The level is initially set at 15 % postconsumer recovered materials and would escalate to 25% in the year 2000.

We believe that the 15 % level is technically achievable on the high speed machines and will have substantially less impact on production costs than the current 50 % recycled content standard contained in EPA's existing paper guideline. Over time, as the mills become more familiar with using recovered materials on their high speed paper machines, they will be able to increase the amount of recovered materials they use relative to virgin materials. Additionally, by providing industry with a clear signal that it is the Federal government's intent to purchase paper with a 25 % recycled content in the future, the industry will be able to make plans to meet the government's demands. We anticipate that individual companies will elect to construct their own deinking plants to make pulp from recovered materials and will substantially reduce their fiber costs when compared to purchasing deinked pulp from others.

Q. Why won't the 15 % postconsumer recycled content standard be a technological barrier to the large, virgin integrated mills where commodity grade papers are made?

A. Based on conversations with numerous paper industry representatives, there are apparently no technical reasons why all of these mills could not make commodity grade papers with 15 % postconsumer recovered material content. Mills do not need to retrofit their plants to feed deinked fiber into the paper machines.

Q. Are there any other barriers that would preclude the large, virgin integrated mills from meeting the 15 % postconsumer recycled content standard?

A. Based on discussions with industry representatives, materials provided by individual paper companies, and our own analyses, we are convinced that, over the short term, it will cost these large, virgin integrated mills more money to make paper that contains recovered materials than if they continue to use only virgin raw materials. Thus, the cost of recycled commodity grade papers in the near term will be higher than equivalent virgin papers if the industry chooses to pass these increased costs on to their customers.

Q. How much more will it cost?

A. We do not know for sure what the increased costs will be over the short term. We know that the incremental cost will increase as the amount of recycled content increases. This is because the large, virgin integrated mills do not have the ability to produce their own deinked pulp and must purchase it from other sources. Simply put, it costs them less to make virgin pulp at their own facility than to buy deinked pulp from another manufacturer. [One source reports that purchased deinked pulp costs \$400 per ton more than virgin pulp made at its mills.]

Based on data received from industry, we have made some crude estimates of the likely cost increase for various levels of recycled content at a large commodity grade mill:

50 % total recycled content:	at least 30 %
15 % postconsumer content:	9 to 12 %
10 % postconsumer content:	6 to 8 %

[NOTE: An off-the-record conversation with one paper company official indicated that cost increases to meet a 10 % recycled content standard would be about 10 %, consistent with our estimates.]

Q. Over the long term, do you anticipate that the cost of recycled commodity grade papers will exceed the cost of virgin commodity grade papers?

A. As mills become more familiar with the properties of recovered materials, it is likely that they will find it easier to use them. Additionally, as companies make the decision to build their own deinking plants, their costs will decrease because they can make deinked pulp at lower costs than they can pay to have someone make it for them. Thus, we expect that over the long term the cost of recycled commodity papers will approach the cost of virgin commodity papers. We do not have the data or information that would enable us to predict when that might occur, but it is reasonable to assume that it may take more than one investment cycle (an investment cycle is about 5 years).

Q. In this time of severe budget constraints, it appears that your approach will end up costing the government and, therefore, the taxpayers more money. Can you explain?

A. We are very concerned about any action that would increase the government's costs of doing business. Thus, in addition to establishing minimum recycled content standards for paper, the Executive Order caps government paper purchases at typical spending levels for the various agencies. We anticipate that any increased paper costs will be offset by reductions in the amount of paper used by the agencies. This provides an incentive for agencies to implement waste prevention techniques such as double-sided copying and use of electronic communications methods. Thus, agencies will be able to purchase recycled paper without increasing their current budgets.

Q. Your focus seems to be on the large mills. Will the smaller mills still be able to conduct business with the Federal government?

A. The small mills typically produce so-called specialty products, such as text and cover, bond, and writing papers. The Federal government has been able to buy these kinds of printing and writing paper with recycled content, and is likely to be able to do so in the future. The Executive Order establishes separate recycled content standards for these kinds of papers. The standards reflect the current state-of-the-art at the small mills where these papers are made. They would require 50 % total recycled content of which 15 % would be postconsumer recovered materials. The postconsumer content standard would increase to 25 % in the year 2000.

This approach ensures that small mills will be able to market their recycled paper products to the Federal government. They will continue to compete with one another for the government's business.

Q. What reactions do you anticipate from the paper industry regarding the recycled paper content standards contained in the Executive Order?

A. We expect that the paper industry will react unfavorably to the 15 % postconsumer content standard. They are seeking as much flexibility as possible. They want the content standard to be as low as possible and strongly prefer that both preconsumer and postconsumer recovered materials be allowed to count toward the content standard.

o Industry has argued that the best way to build markets is to get every mill to participate in the production of recycled paper. They want every machine and every company, including the larger, faster commodity grade mills, to be able to utilize scrap paper in their production processes.

o The industry is advocating two equivalent standards: (a) 10 % postconsumer/processed recovered fiber (this includes postconsumer recovered materials as defined in RCRA and printers and other preconsumer wastes that have coatings or have been printed on); and (b) 50 % recovered paper (this includes all preconsumer and postconsumer recovered materials). They argue that this approach allows both big and small mills to compete across all grades.

o We have some concerns about this approach--paper companies will be able to meet the government's needs by using only preconsumer recovered materials. There are enough coated and printed preconsumer wastes to allow the industry to use only these materials

in the paper they sell to the government. Thus, we favor an approach that stimulates markets for postconsumer materials that are being recovered from the waste stream through such activities as office paper recycling programs and curbside collection programs operated by local governments. Industry's approach does not do that.

Q. What reaction do you anticipate from State and local government officials?

A. State and local government officials should generally be supportive of the Executive Order. They have been strong advocates of postconsumer recovered materials content standards for printing and writing papers. Because they are responsible for running our nation's recycling programs, they want to ensure markets for the materials that are diverted from the solid waste stream. In fact, if we do not include postconsumer content standards, it is likely that our effort will be largely ignored by many State and local governments. This would lead to a myriad of different standards that the industry would have to meet if they choose to market their products to the various Federal, State, and local government agencies.

Q. What reaction do you anticipate from environmental groups?

A. Environmental groups will support our goal of encouraging the large, integrated mills to recycle postconsumer recovered materials. These groups have been strong advocates of postconsumer recovered materials content standards for printing and writing papers and will believe that the Executive Order is focused on the "right" kind of recovered materials. They have been extremely critical of industry for not using postconsumer recovered materials in manufacturing printing and writing papers. They have also criticized EPA for not establishing postconsumer content standards in the paper guidelines the Agency issued in 1988.

These groups would like to see higher content standards than the 15 % standard contained in the Executive Order. They have generally advocated higher levels on the order of 20 to 25 % in the short term escalating to 50 % over time. We believe that it is premature to expect the large, integrated mills to increase postconsumer content standards from the current level of 0 % to a level of 20 %. We believe that it is much more likely that companies will elect to upgrade their facilities by adding deinking equipment if we provide sufficient lead time before they must achieve levels on the order of 20 to 25 %. Thus, the Executive Order establishes a 15 % standard to be achieved one year from issuance of the order and establishes a 25 % standard to be achieved by the year 2000. This will provide the lead time necessary for companies to do the advanced planning needed to modify their existing facilities.

These groups are adamantly opposed to the approach suggested by industry. They would view adoption of industry's approach as a sell out. They favor standards that reward the use of postconsumer, not preconsumer recovered materials, and clearly believe that a 10 % standard would reward industry for what they would view as a "baby step."

**PHOTOCOPY
PRESERVATION**

Total Chlorine Free

Q. How will the proposed Executive Order affect TCF?

- A. The draft Executive Order requires agencies to establish goals for the purchase of TCF paper by 1995. It also requires federal agencies to eliminate unnecessary brightness specifications to encourage the purchase of recycled paper.

Q. What environmental or health problems are associated with the use of chlorine in bleaching?

- A. The widespread use of chlorine in pulp bleaching has led to a variety of environmental problems, including chloroform air emissions and dioxins, furans, and other chlorinated organics in wastewater. Two years ago, EPA began a reassessment of the risks associated with exposure to minute traces of dioxin. While that study is not yet complete, it is likely to suggest that levels of dioxin below current detection limits may contribute to significant noncancer health effects.

Q. Why is "Totally Chlorine Free" bleaching a good idea?

- A. Given current uncertainty surrounding the health effects of minute traces of dioxin and other hazardous chlorinated organics, the Executive Order encourages TCF, which eliminates the root causes of dioxin by eliminating chlorine altogether. Inclusion of TCF in the Executive Order is consistent with the regulatory and policy direction of the EPA. The integrated water/air rule for the pulp and paper industry, to be proposed in October 1993, is moving the industry toward low and non-chlorine bleached production of paper products.

Q. What will be the industry reaction to TCF?

- A. The industry has opposed TCF because it results in less white paper for which the industry has suggested there is no market. Kraft mills will be able to meet the standard without completely eliminating chlorine use. However, some companies (most notably Louisiana Pacific) are committing to TCF technology. LP has argued that the procurement executive order must include incentives for government purchases of TCF paper.

Q. What will be the reaction from the environmental community?

- A. The environmental community completely supports efforts to move to TCF procurement. A number of environmental groups are conducting a campaign to force the EPA to further regulate chlorine discharges from the pulp and paper manufacturing process.

Q. Is this TCF goal unfair to the industry?

- A. Under the language included in the draft executive order, we are not requiring industry to do anything; we are simply letting agencies determine goals for themselves. Industry may choose to switch to TCF production if it is in their economic interest to do so. Pulp and paper companies are undergoing major upgrades and renovations now, and will be making more changes as a result of the integrated water/air pulp and paper rule. If TCF is the direction we would like industry to move, we should be promoting TCF paper in the Executive Order.

White House Nears a Decision on Recycled Paper

By JOHN H. CUSHMAN Jr.
Special to The New York Times

WASHINGTON, Sept. 27 — The White House, which is about to decide whether the Government should buy more recycled paper, today called in representatives from industry, environmental groups, labor unions and cities for a last round of debate on the hotly contested details.

At issue is how to fulfill President Clinton's promise, made in April at Earth Day festivities, to give a vigorous stimulus to the market for recycled paper by putting the buying power of one of the biggest single consumers on the side of recycling, the Federal

Government.

Those who favor a major Government intervention want to see an executive order requiring that all printing and writing paper used by the Government include a minimum proportion of recycled paper, starting at 20 percent and increasing later.

Others, including big paper companies, oppose this on grounds that it would disrupt production and cost jobs. They prefer a rule that calls for only 10 percent recycled content and perhaps uses a looser definition of recycling that includes materials like magazines that were published but never bought, or even certain scrap from the paper

processors.

The Administration circulated a draft this summer that pleased those who wanted the more aggressive approach.

Two weeks ago, environmental advocates began contending that the Administration, after heavy lobbying by the industry, appeared to be backing away from its original plan.

The most senior Democrats in the House and Senate, Speaker Thomas S. Foley of Washington and Senator George J. Mitchell of Maine, both of whom have big constituencies in the forest product industries, were said to be pushing for the looser standard.

But one participant at the meeting today, Alan Hershkowitz of the Natural Resources Defense Council, said he was confident that the Administration would call for a strong new standard.

Mr. Hershkowitz noted that Vice President Al Gore had called for such measures in his book on environmental issues, published while he was a Senator, and had even offered legislation calling for half of all material bought by the Government to be made 50 percent from waste.

At today's meeting, no decision was announced, but one is expected within a few days. The meeting was led by the President's top environmental aide, Katie McGinty, and by Alice M. Rivlin, deputy director of the White House Office of Management and Budget.

Participants said they were asked to discuss several questions. Among them

were whether jobs might be lost under various approaches and whether the industry would be able to supply all the Government's needs if the stricter standard was adopted.

Influencing Market

Although no single customer dominates the paper market, the Government buys 300,000 tons of printing and writing paper a year, giving it a market share of 1 percent or 2 percent of total consumption and making it among the very largest buyers. Its procurement standards would clearly influence the whole industry.

The Administration's decision could mean big financial rewards to companies that can meet the new requirements, and some in the paper industry favor the more aggressive approach.

Local governments, too, are pushing

the Administration hard, since every ton of paper that is recycled and bought by the Government is a ton that need not go into municipal landfills or disposed by other means.

Federal policy calls for the nation to recycle 25 percent of all solid waste, said David Gatton, environmental advisor at the National Conference of Mayors, who attended the meeting at the White House. But only 17 percent of waste is currently being recycled.

"If we don't have a Federal procurement policy that helps push the markets, and the private sector, to use more recycled content materials, we are never going to make it to 25 percent," he said.

Get new ideas on the Op-Ed Page.

U.S. and Peru at Odds Over Death of Airman

By NATHANIEL C. NASH
Special to The New York Times

LIMA, Peru, Sept. 24 — The attack on a United States military transport plane by two Peruvian jet fighters in April 1992, in which an American airman was sucked out of the plane, has come back to haunt the Government of President Alberto K. Fujimori and strain relations with the United States.

A foreign aid appropriations bill passed by the Senate on Thursday included an amendment prohibiting the United States from disbursing \$100 million in aid planned for the Peruvian Government in the 1994 fiscal year, until Peru settles damage claims with

the family of Sgt. Joseph Beard.

Sergeant Beard fell from the American C-130 military transport at 20,000 feet off the northern coast of Peru, when strafing by Peruvian fighters blew a hole in the fuselage, on April 24, 1992. His body has never been found.

The amendment, sponsored by Senator Jesse Helms, Republican of North Carolina, has the support of Democratic senators, and seems to reflect the Clinton Administration's policy of using foreign aid to Peru to improve the Fujimori Government's record on human rights and respect for international codes of conduct.

"The desire is not to be punitive with

Peru, but there hadn't been any movement on compensating the Beard family for months," a member of Senator Helms's staff said in a telephone interview. "This is a very sensitive issue in the Congress because the death of a United States serviceman is involved, and responsible nations, when this kind of thing happens, do what they can to compensate the families."

The amendment also instructs the United States to urge international lending organizations to withhold loans to Peru until a settlement on the Beard issue is reached.

The case presents thorny issues for Mr. Fujimori and Peru. The Beard

family is seeking payment of about \$900,000, which an Air Force analysis calculated would be the present value of the sergeant's earning power over his expected lifetime. Peru is offering to pay between \$100,000 and \$150,000.

In a country with so much poverty, a deep recession and average monthly wages of about \$60, a payment of almost \$1 million to the family would unleash criticism. There is also fear that if Mr. Fujimori agreed to such a payment, it would cause deep resentment in the armed forces, which still assert that they were justified in shooting at the plane.

Mr. Fujimori repeated the Government's claim that Peru was not responsible for the incident, and that the shooting was provoked by the pilots of the American plane, who refused to communicate with the Peruvian pilots

or obey their signals to land. Peru claims its pilots feared that the large transport was carrying drugs.

Yet, if the Helms amendment is approved over the next few days by a House-Senate conference committee, Mr. Fujimori will have little choice if Peru is to get the much-needed aid.

"The position of the Peruvian Government and the results of the investigation were clear, that there does not exist the responsibility in reference to this case," Mr. Fujimori said. "But the Government of Peru, on humanitarian grounds, is trying to compensate for the debts."

According to Peruvian officials, the cooling of tensions between Peru and the United States is important for Mr. Fujimori, since he travels to the United Nations next week to present his case for seizing almost dictatorial powers

on April 5, 1992. He shut down the Congress and the courts, in an effort to stop corruption and combat the leftist guerrilla group called the Shining Path.

Though strongly supported by Peruvians, he became almost an international pariah and has been struggling since to convince Western nations that his actions were his only recourse to prevent the Shining Path from toppling the Government.

In the wake of what is called the Fujimori coup, the United States stopped all but relief aid. When less than three weeks later the Peruvian jets strafed the American C-130, it only added to the acrimony.

"Our point is that even when we know we are tracking a plane loaded with drugs, we don't shoot it out of the sky," said a State Department official who asked not to be identified.



FAX TO BRIAN BURKE

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202 783-7800
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9/20/93

Brian:

As promised, here is Georgia Pacific's declaration to the public that they will not make TCF products even if their customers want them.

Also, for your information, an editorial from 1991 warning US producers that chlorine-dependent technologies are "stopgap" (transitional) ones.

When will US manufacturers get the message?

Jessica Landman
202-624-9341

COMMENT

G-P takes a position on chlorine-free pulps



A.D. "PETE" CORRELL
is president and chief
operating officer of
Georgia-Pacific Corp.
The following is taken
from a letter Mr.
Correll sent to G-P's
pulp customers.

The issues of dioxin, chlorine, chlorinated organics, and adsorbable organic halogens (AOX) have been topics of great debate in our industry for several years. As the largest supplier of market pulp in the world, Georgia-Pacific Corp. has devoted tremendous time and resources toward understanding these issues. We have now reached decisions that will be the basis for our business strategy in the coming years.

First, let me assure you we did not make these decisions lightly. The stakes for Georgia-Pacific and for you are enormous. We must continue our corporate heritage of environmental stewardship balanced against a commitment to you, our customers, to provide a cost-effective raw material so that you can compete in the increasingly competitive world paper markets. We have used the best scientific expertise available, much from research that we have supported, to assist us in reaching our decision. We will continue to support research and monitor all scientific and technical findings in this area.

NO HEALTH RISK FOUND. The fact is that Georgia-Pacific can find no scientific evidence to indicate measurable environmental or health impacts linked to the release of properly treated mill effluents from our pulp and paper mills that use chlorine in the United States. Despite many claims by environmental groups to the contrary, the scientific evidence indicates that our level of use of chlorine is environmentally safe.

When it became known that minute levels of dioxin were formed as an unwanted by-product of the chlorine bleaching process, Georgia-Pacific moved aggressively to understand the issue. Any dioxin formation at our mills was incredibly small and near or below conventional detection limits. Nonetheless, we invested more than \$100 million to reduce those minute amounts by more than 85% to levels that are beyond any human health risk, even using the most conservative assumptions. Our operating strategy has been to increase use of chlorine dioxide, and decrease amounts of elemental chlorine.

CHLORINE DIOXIDE INVESTMENT. We have reached a point now where we must decide whether to continue to invest in increased chlorine dioxide substitution with a long-term goal of virtual elimination of elemental chlorine from our bleach plants, or to abandon our assets and these plans in a quest for bleaching processes that utilize no chlorine ions. The cost of seeking nonchlorine compounds for the bleaching process would be enormous without any corresponding health benefit offset and would force Georgia-Pacific from our position as the largest and most competitive market pulp supplier. We find no scientific rationale for such an ill-conceived move and have rejected the idea. We will continue to invest in chlorine dioxide substitution at our bleach plants.

The key question is, "What does this mean to you, our valued pulp customer?" First, it means that Georgia-Pacific will continue its commitment to be the environmentally sensitive, low-cost producer of the highest-quality market pulp to the industry. We are convinced that our business strategy is sound and are continuing to fund our market pulp business in spite of these very difficult times. Second, it means you can plan your supply needs around that commitment. If you feel you must have "chlorine-free" bleached pulps which cannot have used even chlorine dioxide and your markets will accept the differences in quality and performance, then G-P can no longer be a supply source.

Georgia-Pacific has an impressive array of world-class market pulp mills located in low-cost fiber baskets. Our softwood mills at Brunswick [Ga.] and Leaf River [Ill.] are among the world's best. Our hardwood mills at Ashdown [Ark.], Woodland [Maine], Port Hudson [La.], Leaf River, and Palatka [Fla.] produce cost-effective pulps that can reduce your pulp cost and improve your quality. At all of these mills our commitment to serve you and protect the environment is enduring. We are convinced these strategic decisions will serve all of us well in the coming years.

Industry on threshold of nonchlorine era

In recent months, the world paper industry has taken some meaningful steps toward nonchlorine bleaching of chemical pulps. Currently, only two mills are reported to be using or are in the process of installing commercial-scale, nonchlorine capacity: Union Camp Corp. at Franklin, Va., and Lenzing AG at Lenzing, Austria. But more companies are looking at ozone/oxygen/peroxygenn-based bleaching, and others will surely follow the lead of these two mills.

Ozone technology is not new. Several paper companies have been exploring and developing alternative ozone-anchored sequences for more than a decade. The commercial feasibility of a high-brightness, nonchlorine bleaching sequence for even southern softwood kraft pulps has been known for some time, and eventually most modern, large chemical pulp mills worldwide will no doubt be weaned entirely from the use of elemental chlorine and even chlorine-containing compounds.

Obviously, some process and economics complications still have to be resolved. Keys to the efficient and economical use of ozone include a fairly low kappa number to the bleach plant and carefully controlled pH and temperature. Recent advances in the cooking stages, including Kamyr's MCC/EMCC systems for continuous digesters and Beloit's RDH and Sunds Defibrator's Super Batch technologies for batch digesters, have opened the door for lower kappa pulps while maintaining respectable, or even improved, strength properties.

Advances in oxygen delignification are also playing a major role in getting kappa numbers down to "ozone-level" bleaching, particularly for kraft softwood pulps. Kamyr, Impco, and Sunds are pioneering some new approaches to both oxygen delignification and bleach plant design that should help usher in a nonchlorine era later this decade.

MONEY WELL SPENT. The paper industry has taken big steps toward reduced- and nonchlorine bleaching. After the "chloro-toxin" problem in bleach plant effluents was first discovered only a few years ago, mills moved quickly to get levels of dioxins and furans, in particular, within hastily imposed, stringent government requirements.

Investments in chlorine dioxide generation capacity (to boost substitution of

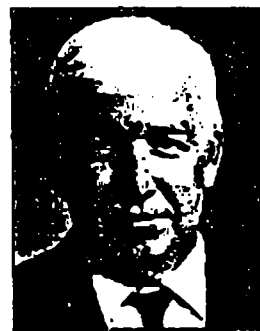
ClO₂ for Cl₂) rose dramatically as mills spent an average of \$15 million/20 tons of generating capacity. Spending for this stopgap technology is continuing. U.S. environmental expenditures this year, for example, will increase to \$1.4 billion, compared with only \$465 million two years ago. A high percentage of this spending is for additional chlorine dioxide capacity.

In the very near future, many of these same mills will again be asked to invest heavily in ozone generation capacity. Again, the economic burden will be heavy, but one potentially major side benefit is the opportunity to finally close up pulp mill effluent streams. Elimination of waste treatment represents a considerable economic incentive for most mills, but, possibly more important, it could remove the paper industry from many environmentalist hit lists. What a relief that would be.

THE NEXT CENTURY. Two articles in this issue look at emerging trends in chemical pulping. Beginning on page 110, vanguard bleaching developments being installed at mills today are traced into the next century. Probable sequences are explored based on successes and failures of several new approaches. A hypothetical case study of a bleached softwood kraft mill of the next century (p. 57) analyzes not only future technology in relation to anticipated environmental demands but also looks at the detailed costs of installing and operating it.

A special Pulp & Paper report on pulping and bleaching technology of the twenty-first century will be published separately and distributed with a near-future issue of the magazine. This report will examine not only new pulping technologies but also the driving forces behind their implementation during the next 10 to 15 years.

Also as part of our continuing coverage of current and future pulping and bleaching developments, Pulp & Paper, along with Emerging Technology Transfer Inc., is sponsoring a conference on nonchlorine bleaching March 2-5, 1992, at Hilton Head, S.C. This special meeting will examine the current status of reduced- and nonchlorine bleaching in Europe, Scandinavia, North America, Australasia, and several third world countries. More information is available on page 100 of this issue.



KEN PATRICK
is editor in chief
of Pulp & Paper.

WHAT'S AHEAD

POWER AND STEAM

Analysis of requirements for recovering steam from a thermomechanical pulping system; welding-based repair of turbine rotors offers a viable alternative for pulp and paper mills; guidelines for turbogenerator maintenance in paper industry power plants; Green Bay Packaging reduces tube failure and boiler downtime by eliminating iron oxide deposition in returned mill dryer condensate

TRAINING

Examination of deficiencies and problems with traditional training methods in comparison with newer, more innovative approaches; Canadian pulp and paper mill improves operator and maintenance personnel skills with computer-simulation training system; profile of computer-based training programs at two Southeastern paper mills

EXPANSION/ MODERNIZATION

Canadian Pacific Forest Products brings new newsprint machine and delinked fiber system online at its Thunder Bay, Ont., mill

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RECOMMENDATION FOR A FEDERAL PROCUREMENT STANDARD
FOR PRINTING AND WRITING PAPER
AND
RESPONSE TO AFPA'S PROPOSED DEFINITION AND STANDARD

July 29, 1993

The establishment of a federal procurement standard is *not* the equivalent of a mandatory recycled content standard; it is a *voluntary* program with respect to participation by paper manufacturers. Those companies that choose not to (or cannot) produce paper that meets the standard are in no way excluded from the marketplace; they simply pass up the opportunity (not a right by any means) to sell their paper to the federal government.

EDF Recommendation

EDF recommends a one-tier post-consumer standard, rather than a two-tiered (e.g., pre- and post-consumer or total and post-consumer) standard. We also recommend the standard be based on a strict post-consumer definition, not on a "deinked" or "processed" recovered fiber definition, as proposed by AFPA.

We further recommend that a federal procurement standard specify at least 20% post-consumer content for the purchase of printing and writing paper by federal agencies. For grades of paper that are very difficult to produce with this level of recycled content, such as lightweight coated papers, the post-consumer content level could be relaxed to 15%. (These numbers are offered on a fiber weight basis.)

These levels we regard as quite modest and readily achievable in the short term if not immediately. It is essential, however, that the minimum content level be increased over time. This will serve the important function of providing a clear signal to paper manufacturers as they consider near-term investments in future capacity. We regard as feasible in the medium term minimum post-consumer content levels of 25-30%, and recommend that any federal standard specify such levels.

Response to AFPA Definition and Standard

1. **Why shouldn't the definition of materials to which the procurement standard applies be expanded beyond *post-consumer* materials to include other "processed recovered fiber" sources, as proposed by the American Forest and Paper Association (AFPA)?**

The two major categories of materials included in "processed recovered fiber" that are not post-consumer materials are: (1) converting scrap; and (2) over-issue/returned materials. There are several major reasons why these materials should not be given "credit" under the procurement standard.

a. Inclusion of these materials at this time would amount to changing the rules in the middle of the game, unfairly penalizing paper manufacturers that have made the investments in processing equipment required to handle post-consumer materials.

Post-consumer paper is almost always more contaminated, more difficult to process by paper mills, and more uncertain as to its content (i.e., types of contaminants and fibers) than a pre-consumer equivalent (e.g., newspaper recovered in a curbside collection program vs. over-issue newspapers returned by distributors). Post-consumer paper is thus the overwhelming focus of concern for municipal and private recycling collectors, and for all those who seek to reduce the amount of waste going to landfills and incinerators.

A strict post-consumer standard provides a clear signal that the paper mills that invest in R&D and technology to recycle more difficult-to-process post-consumer paper -- and thereby make the most direct and measurable contribution to reducing paper disposal -- will receive the greatest reward in the marketplace. Conversely, a less rigorous standard, such as the AFPA proposal, rewards mills that have not made investments in equipment to handle post-consumer fiber, because their product will gain the same "recycled" label as that from mills that are using post-consumer fiber.

The AFPA proposal also ignores the fact that the post-consumer definition has been well established in federal and state law for many years and is the *defacto* standard in the private market. A wide array of state and local laws have for many years utilized a strict definition of post-consumer materials in procurement.

In addition, numerous large corporations, such as Wal-Mart, McDonald's, The Prudential, Hallmark, Time-Warner, AT&T, Bristol-Myers Squibb, Proctor & Gamble, Kelloggs, General Mills and others, require post-consumer content in the recycled content printing and writing paper that they purchase and/or label post-consumer content on their packaging. Bank of America and Pacific Gas & Electric Co. have organized a group of over twenty major West Coast companies that are committed to buying printing and writing paper with post-consumer content.

b. Post-consumer waste paper is the problem. It constitutes the overwhelming majority of waste paper disposed of in landfills and incinerators. In contrast, recovery rates for converting scrap and over-issue materials are high and rising, due to their relative quality and ease of collection and processing.

Figure A and Table 1, taken from a study conducted in 1992 for the Recycling Advisory Council (RAC),¹ demonstrate that *98% of waste paper disposed of in 1990 and projected to be disposed of in 1995 are post-consumer materials*. Converting scrap and over-issue materials each constitute about 1% or less of disposed waste paper in 1990 and 1995; disposal of printed converting scrap (which would be included under the AFPA's "processed recovered fiber" definition) is even lower, only 0.2% in both 1990 and 1995.

As for recovery rates for these materials, Figure A and Table 1 also show that *the great majority of converting scrap and over-issue materials are already being recovered, and will continue to be even in the absence of any action by government.*

- 94% of all types of converting scrap was recovered in 1990 and the same rate is projected for 1995. Recovery rates for all types of *printed* converting scrap -- which one might think is more difficult to process -- are just as high, for both 1990 (93%) and 1995 (94%).
- Recovery rates for the subset of converting scrap derived from printing and writing (P&W) paper -- the material most relevant here -- are even higher: *Recovery rates of both unprinted and printed P&W paper converting scrap are 98% for both 1990 and 1995.*
- 62% of all types of over-issue materials was recovered in 1990, and this is projected to grow to 83% by 1995 in the absence of any action by government. While only 41% of P&W-derived over-issue materials was recovered in 1990, this is projected to grow to 81% by 1995.²
- In contrast, post-consumer materials were recovered at a rate of only 28% in 1990, projected to grow to only 36% by 1995.

In sum, converting scrap and over-issue materials are taking care of themselves, due to their economic value (resulting from the facts that they are relatively free of contaminants and easy to collect) and the already well-established industry recovery practices. Post-consumer materials are where the problem lies with respect to both disposal and slow growth in recycling, and that is where federal procurement policy should be directed.

c. Giving "credit" to converting scrap and over-issue materials will essentially reward the status quo, and will discourage new investment needed to increase waste paper recycling.

Adoption of the AFPA definition of "processed recovered fiber" runs the risk of allowing much or most of all P&W paper produced in the U.S. to virtually instantaneously qualify as "recycled" -- without increasing recovery of post-consumer materials by one ounce.

Table 2 presents an analysis of data from the RAC report that indicates how much P&W paper could potentially qualify as recycled if the AFPA's proposed definition and 10% standard were adopted -- all of it achieved by using recovered printed converting scrap and over-issue materials, and not any post-consumer materials.

It should be noted that we have been very conservative (i.e., restrictive) in our interpretation of what would be included under AFPA's definition of "processed recovered fiber" (which has yet to be clearly defined by AFPA):

- Our analysis includes only that subset of *printed* converting scrap and over-issue materials *derived from P&W paper*, thus excluding: (1) other potential sources of printed converting scrap and over-issue (e.g., those derived from newsprint, bleached paperboard, and specialty papers) that could well be used to make P&W paper; and (2) unprinted materials that would require processing because of the presence of coatings, fillers, other additives, or other non-fibrous components.
- We used the RAC study's estimates for printed converting scrap, which the authors stated as probably representing underestimates. Even so, the authors assumed that 47% of all types of converting scrap would qualify as "processed."³ In contrast, the values we used were limited to recovered, printed, P&W-derived converting scrap; these represent only 24% of the total amount of P&W-derived converting scrap, and only 9% of all types of converting scrap.

The results of our analysis (Table 2) indicate that, under the AFPA's expanded definition and proposed 10% standard, in 1990 there was sufficient recovery of printed, P&W-derived converting scrap and over-issue material to incorporate 10% "recycled" content into 48% of all P&W paper produced in the U.S. -- without including even one ounce of post-consumer material. *And by 1995, almost two-thirds of all P&W paper to be produced in the U.S. could potentially qualify as "recycled" under the AFPA definition and standard -- again, without touching any post-consumer materials!*

The more than 18 million tons of P&W paper that could be produced at the AFPA's 10% level in 1995 without using post-consumer material dwarfs the federal government's procurement of paper (a mere 300,000 tons annually) by more than a factor of 60! Even at a 15% level, over 12 million tons of P&W paper could "qualify" under the AFPA definition --

still more than 40 times the level of federal procurement. (At ratcheted-up levels of 20% and 25%, more than 9 million and 7 million tons, respectively, would qualify even today.)

Herein lies the danger in not adopting both a strict post-consumer definition *and* sufficiently high content standards: in their absence, a federal procurement standard will do nothing more than enshrine the status quo, except possibly to spur some more even spatial distribution of converting scrap and over-issue materials to facilitate wider compliance with the standard. In fact, given that a 10% post-consumer standard already exists *defacto* in the marketplace, adopting the AFPA proposal would actually be a major step backward.

2. Is there currently sufficient capacity to produce paper meeting the Executive Order's post-consumer definition and standard?

The answer is an overwhelming yes. Table 3 presents a summary, and Table 4 a detailed compilation, of existing and near-future expected deinked pulp capacity in the U.S., along with amounts of paper that are or could be produced at these mills containing various levels of post-consumer content. Figure B presents the post-consumer pulp and paper capacity data graphically. These data demonstrate that there is plenty of post-consumer deinked pulp available to meet the government's needs.

There are two sources of deinked pulp made from post-consumer wastepaper: (1) pulp mills that produce deinked pulp to sell on the open market, and (2) integrated paper manufacturers that use the deinked pulp they produce to make paper on their own paper machines. Today, over 1,500 tons of market post-consumer deinked pulp are produced *daily* in the U.S. (amounting to more than 525,000 tons annually).⁴ Even if only the available market pulp from U.S. mills was incorporated into P&W paper at a 15% post-consumer content level, the industry could supply about 4.5 million tons of paper this year. If the same paper contained 30% post-consumer content, the amount available would be 2.25 million tons. These numbers are enormous relative to current federal government demand of about 300,000 tons annually.

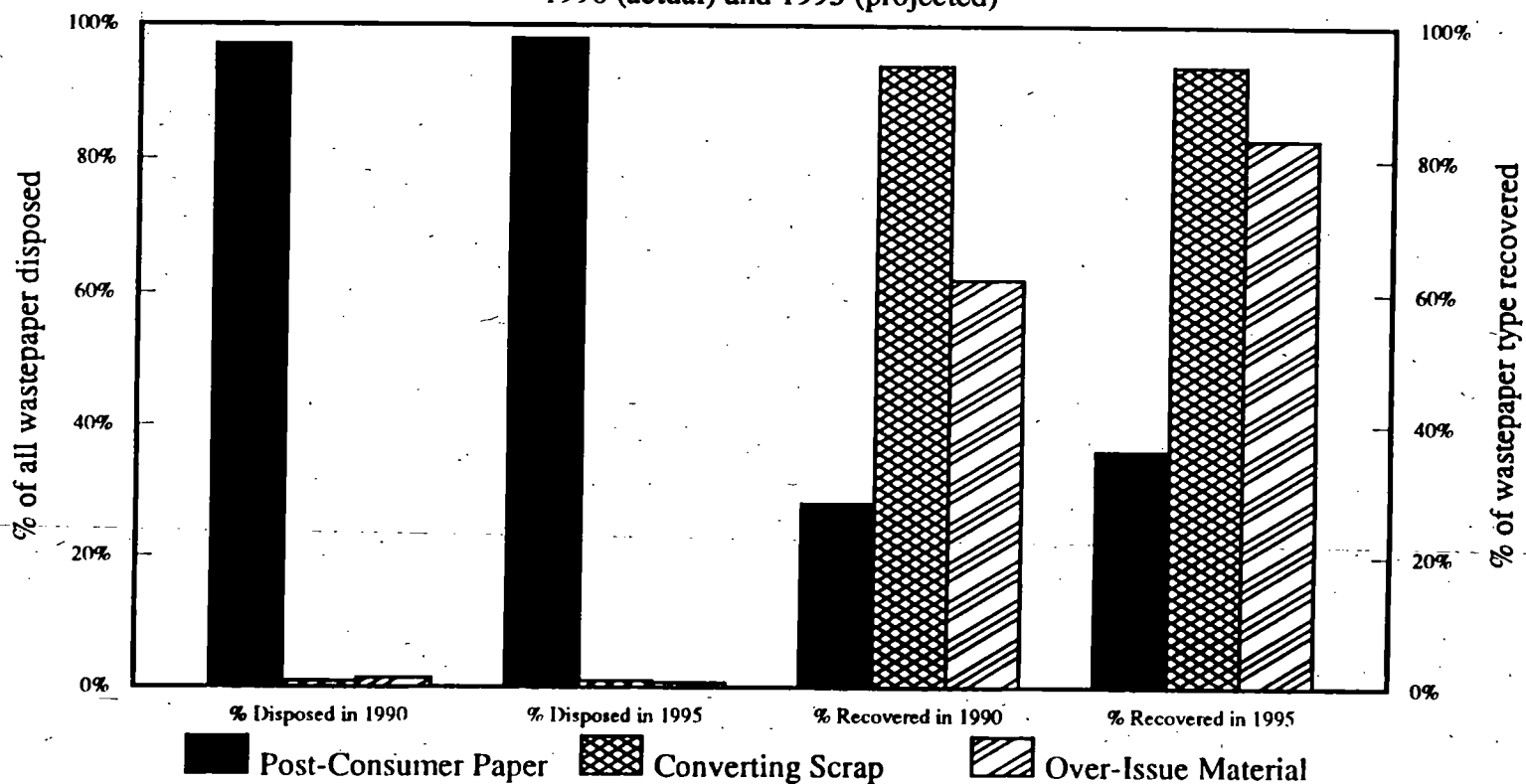
By 1995, expected capacity for this market pulp will more than triple -- to over 5,000 tons of post-consumer deinked market pulp produced daily in the U.S. Using this pulp, 7.3 million tons of P&W paper with a 30% post-consumer content or 14.6 million tons of P&W paper with 15% post-consumer content could be produced. If we add the available capacity in Canada and that from the integrated pulp producers, these figures are even larger: 9.5 million tons of P&W paper with 30% consumer content or 19 million tons of P&W paper with 15% post-consumer content could be produced in North America in 1995.

ENDNOTES

1. Franklin Associates Ltd., *Evaluation of Proposed New Recycled Paper Standards and Definitions*, January 27, 1992, prepared for the Recycling Advisory Council.
2. The reason for the low rate in 1990 was primarily attributed to low recovery of magazines (17%), a category that goes primarily into newsprint and is therefore not very germane to government purchasing. More relevant are business forms, which are the next largest source of over-issue materials; these were recovered at a high rate of 75% in 1990, projected to grow to 80% in 1995.
3. Franklin Associates Ltd., *Evaluation of Proposed New Recycled Paper Standards and Definitions*, draft dated October 8, 1991, Appendix A, p. A-6.
4. EDF confirmed, through published sources and telephone interviews with mill personnel, that each of the existing sources (and all of the projected sources that could be checked) listed in Table 4 produce (or will produce) deinked pulp from post-consumer waste paper.

Relative Disposal and Recovery of Major Types of Wastepaper

1990 (actual) and 1995 (projected)



SOURCE: Franklin Associates, Evaluation of Proposed New Recycled Paper Standards and Definitions, January 27, 1992
(Prepared for the Recycling Advisory Council)

FIGURE A

POSTCONSUMER PAPER IS OVERWHELMINGLY WHERE THE PROBLEM LIES FOR AMOUNT DISPOSED AND AMOUNT RECYCLED

(thousand tons)	1990 Quantity Generated	1995 Quantity Generated	1990 Quantity Recovered	1995 Quantity Recovered	1990 Quantity Disposed	1995 Quantity Disposed
Post-consumer	72704	82515	20014	29610	52690	52905
Converting scrap						
All types	8117	9230	7648	8715	469	515
P & W only	3097	3563	3035	3491	62	72
Printed conv. scrap						
All types	1854	2120	1722	1996	132	124
P & W only	753	882	738	864	15	18
Over-issue						
All types	2045	2250	1265	1860	780	390
P & W only	1147	1208	476	973	671	235
Magazines	588	660	100	561	488	99
Business forms	391	361	293	289	98	72
	1990 % of Total Generated	1995 % of Total Generated	1990 % of Total Recovered	1995 % of Total Recovered	1990 % of Total Disposed	1995 % of Total Disposed
Post-consumer	86%	86%	65%	70%	97%	98%
Converting scrap						
All types	10%	10%	25%	21%	0.9%	1.0%
P & W only	4%	4%	10%	8%	0.1%	0.1%
Printed conv. scrap						
All types	2%	2%	6%	5%	0.2%	0.2%
P & W only	0.9%	0.9%	2%	2%	0.0%	0.0%
Over-issue						
All types	2%	2%	4%	4%	1.4%	0.7%
P & W only	1.4%	1.3%	2%	2%	1.2%	0.4%
Magazines	0.7%	0.7%	0.3%	1.3%	0.9%	0.2%
Business forms	0.5%	0.4%	1.0%	0.7%	0.2%	0.1%
			1990 % Recovered of Amt. Generated	1995 % Recovered of Amt. Generated	1990 % Disposed of Amt. Generated	1995 % Disposed of Amt. Generated
Post-consumer	--	--	28%	36%	72%	64%
Converting scrap						
All types	--	--	94%	94%	6%	6%
P & W only	--	--	98%	98%	2%	2%
Printed conv. scrap						
All types	--	--	93%	94%	7%	6%
P & W only	--	--	98%	98%	2%	2%
Over-issue						
All types	--	--	62%	83%	38%	17%
P & W only	--	--	41%	81%	59%	19%
Magazines	--	--	17%	85%	83%	15%
Business forms	--	--	75%	80%	25%	20%

SOURCE: Franklin Associates, Evaluation of Proposed New Recycled Paper Standards and Definitions, January 27, 1992,
prepared for the Recycling Advisory Council

TABLE 1

Very conservative estimates indicate that at least half of all the P&W paper produced in the U.S. could easily and immediately qualify as "recycled" under the AFPA definition (i.e., contain 10% "processed recovered fiber" ("PRF")) without using ANY post-consumer materials.

(1000 tons)	1990 Quantity Recovered	1995 Quantity Recovered	1995 Maximum Potential (1)
Printed converting scrap from P & W paper	738	864	882
Overissue P & W paper	476	973	1,208
TOTAL QUANTITY RECOVERED (2)	1214	1837	2090
AMT. OF P&W PAPER THAT COULD BE PRODUCED AT 10% "PRF" LEVEL (3)	12,140	18,370	20,900
TOTAL U.S. P&W PAPER PRODUCTION	25,067	28,270	28,270
% OF ALL U.S. P&W PAPER PRODUCTION REPRESENTED BY AMT. OF PAPER THAT COULD BE PRODUCED AT AFPA'S 10% "PRF" LEVEL	48%	65%	74%

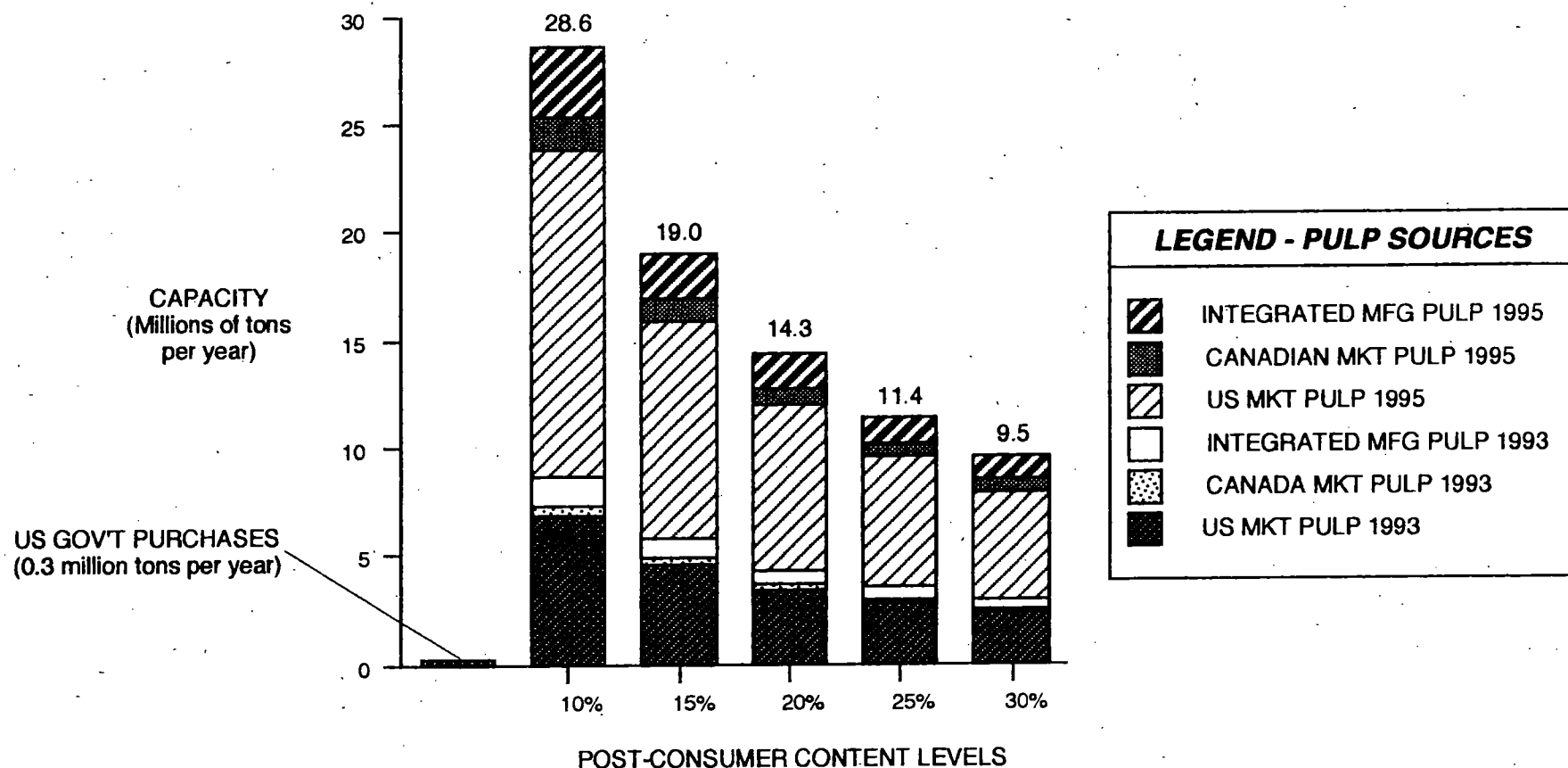
NOTES:

- (1) These quantities represent 100% recovery of the printed converting scrap and over-issue P&W-derived materials.
- (2) These values are very conservative estimates, as they do not include other potential sources of converting scrap and overissue that could qualify as "processed recovered fiber" as defined by the AFPA.
- (3) These values are 10 times the total quantity recovered, and assume the recovered material is equally distributed across the printing and writing paper into which it is incorporated.

SOURCE: Franklin Associates, Evaluation of Proposed New Recycled Paper Standards and Definitions, January 27, 1992, prepared for the Recycling Advisory Council

TABLE 2

PRINTING AND WRITING PAPER VOLUMES BY POST-CONSUMER CONTENT 1993 AND EXPECTED IN 1995



Notes: (1) Paper volumes are based on a 350 day production year and they assume that 80% of the paper is fiber by weight.
 (2) A paper company produces integrated mfg pulp, deinked post-consumer pulp, for its own papers.

Sources: Pulp and Paper Week; 1992 North American Pulp and Paper Factbook; 1993 Lockwood-Post's Directory; Paper Recycler, March 1993; Resource Recycling, April 1993; interview.

FIGURE B

PRINTING AND WRITING CAPACITY WITH POST-CONSUMER FIBER -- SUMMARY
Present and expected additional capacity by 1995

	DEINKED PULP CAPACITY (1) Tons per day	CAPACITY FOR PAPER WITH POST-CONSUMER CONTENT AT (2)				
		10%	15%	20%	25%	30%
		Thousands of tons per year (3)				
DEINKED MARKET PULP IN 8/93						
US	1,550	6,781	4,521	3,391	2,713	2,260
CANADA	105	459	306	230	184	153
TOTAL	1,655	7,241	4,827	3,620	2,896	2,414
DEINKED MARKET PULP IN 1995						
US	5,010	21,919	14,613	10,959	8,768	7,306
CANADA	459	2,008	1,339	1,004	803	669
TOTAL	5,469	23,927	15,951	11,963	9,571	7,976
US INTEGRATED DEINKED PULP CAPACITY IN 8/93 (4)	321	1,402	935	701	561	467
US INTEGRATED DEINKED PULP CAPACITY IN 1995 (5)	1,057	4,623	3,082	2,312	1,849	1,541
TOTAL DEINKED MARKET PULP CAPACITY IN 8/93						
US	1,871	8,184	5,456	4,092	3,273	2,728
NORTH AMERICA	1,976	8,643	5,762	4,322	3,457	2,881
TOTAL DEINKED MARKET PULP CAPACITY IN 1995						
US	6,067	26,542	17,695	13,271	10,617	8,847
NORTH AMERICA	6,526	28,550	19,033	14,275	11,420	9,517

Sources: Pulp and Paper Week; 1992 North American Pulp and Paper Factbook; 1993 Lockwood-Post's Directory;
Paper Recycler, March 1993; Resource Recycling, April 1993; Interviews.

Notes:-

- (1) All deinked fiber is post-consumer
- (2) Paper volumes assume that 80% of the weight of the paper is fiber
- (3) Paper volumes are based on a 350 day year
- (4) Integrated deinked pulp is produced for internal consumption
- (5) Additional potential capacity is capacity that can be switched to produce post-consumer deinked pulp should demand warrant it.

TABLE 3

PRINTING AND WRITING PAPER CAPACITY WITH POST-CONSUMER FIBER
Present and expected additional capacity by 1995

DEINKED MARKET PULP		Initial start-up date	Deinked pulp capacity (1)	Capacity for paper with post-consumer content at (2)				
Company	Location		Tons per day	10%	15%	20%	25%	30%
				Thousands of tons per year (3)				
UNITED STATES 8/93								
Ponderosa	Santa Ana, CA	1966	150	656	438	328	263	219
Ponderosa	Augusta, GA	1970	180	787	525	394	315	263
Ponderosa	Oshkosh, WI	1972	250	1,094	729	547	438	365
Ponderosa	Memphis, TN	1974	240	1,050	700	525	420	350
Mississippi River	Natchez, MS	1990	250	1,094	729	547	438	365
Prime Fiber	Appleton, WI	1991	50	219	146	109	88	73
Kieffer Paper Mills	Brownstown, IN	1992	110	481	321	241	193	160
Ecofibre/Riverside Paper	DePere, WI	1992	100	437	292	219	175	146
Fox River	DePere, WI	1992	220	962	642	481	385	321
TOTAL UNITED STATES			1,550	6,781	4,521	3,391	2,713	2,260
CANADA 8/93								
Desencrage Cascades	Breakeyville, Que.	1986	105	459	306	230	184	153
TOTAL FROM NORTH AMERICAN MILLS 8/93			1,655	7,241	4,827	3,620	2,896	2,414
UNITED STATES 1995								
Dynamis	Sanger, CA	1993	150	656	438	328	263	219
Superior Recycled Fiber	Duluth, MN	Sept. 1993	250	1,094	729	547	438	365
Burrows Paper	Little Falls, NY	Nov. 1993	50	219	146	109	88	73
Pencor	Hagerstown, MD	Q3 1994	400	1,750	1,167	875	700	583
Solar International Trading	Morrisville, PA	Q4 1994	340	1,487	992	744	595	496
Minnesota Pacific	Port of Duluth, MN	Q4 1994	200	875	583	437	350	292
N. American Recycling Systems	Fort Edward, NY	late 1994	300	1,312	875	656	525	438
Great Lakes Pulp & Fibre	Menominee, MI	1994	500	2,187	1,458	1,094	875	729
Green Bear	Vancouver, WA	Jan. 1995	400	1,750	1,167	875	700	583
Ponderosa	Northampton, PA	Q1 1995	400	1,750	1,167	875	700	583
American Power	Barrackville, WV	Spring 1995	470	2,056	1,371	1,028	823	685
TOTAL UNITED STATES 1995			5,010	21,919	14,613	10,959	8,768	7,306
CANADIAN 1995								
Cascades	Cap-de-la-Madelein	1992/1993	330	1,444	963	722	578	481
DeNovo/Consumers Paper	Redcliff, Alta.	Spring 1994	24	105	70	53	42	35
TOTAL CANADA 1995			459	2,008	1,339	1,004	803	669
TOTAL FROM NORTH AMERICAN MILLS IN 1995			5,469	23,927	15,951	11,963	9,571	7,976

TABLE 4

PRINTING AND WRITING PAPER CAPACITY WITH POST-CONSUMER FIBER (CONT'D)
Present and expected additional capacity by 1995

INTEGRATED DEINKED PULP CAPACITY (US ONLY)		Initial start-up date	Deinked pulp capacity	Capacity for paper with post-consumer content at				
Company	Location			10%	15%	20%	25%	30%
				Thousands of tons per year				
CAPACITY AS OF 8/93								
Appleton Papers	West Carrollton, OH		30	131	88	66	53	44
Boise Cascades	Vancouver, WA		100	437	292	219	175	146
James River	Halsey, OR		137	598	399	299	239	199
Cross Pointe	West Carrollton, OH		54	235	157	118	94	78
TOTAL INTEGRATED CAPACITY AS OF 8/93 (4)			321	1,402	935	701	561	467
INTEGRATED CAPACITY AS OF 1995								
Cross Pointe	Park Falls, WI	in 1993	50	219	146	109	88	73
Burrows Paper	Little Falls, NY	Nov. 1993	50	219	146	109	88	73
Union Camp	Franklin, VA	late 1994	300	1,312	875	656	525	438
International Paper	Corinth, NY	1994	50	219	146	109	88	73
ADDITIONAL POTENTIAL CAPACITY AVAILABLE (5)								
Appleton Papers	West Carrollton, OH		195	853	569	427	341	284
James River	Halsey, OR		91	399	266	199	160	133
TOTAL INTEGRATED CAPACITY AS OF 1995			1,057	4,623	3,082	2,312	1,849	1,541
TOTAL CAPACITY 8/93								
United States			1,871	8,184	5,456	4,092	3,273	2,728
North America			1,976	8,643	5,762	4,322	3,457	2,881
TOTAL CAPACITY 1995								
United States			6,067	26,542	17,695	13,271	10,617	8,847
North America			6,526	28,550	19,033	14,275	11,420	9,517

Sources: Pulp and Paper Week, 1992 North American Pulp and Paper Factbook; 1993 Lockwood-Post's Directory; Paper Recycler, March 1993; Resource Recycling, April 1993; interviews.

- Notes:
- (1) All deinked fiber is post-consumer
 - (2) Paper volumes assume that 80% of the weight of the paper is fiber
 - (3) Paper volumes are based on a 350 day year
 - (4) Integrated deinked pulp is produced for internal consumption.
 - (5) Additional potential capacity is capacity that can be switched to produce post-consumer deinked pulp should demand warrant it.

TABLE 4

THE EXECUTIVE ORDER AND THE PRIVATE MARKET FOR RECYCLED-CONTENT PAPER

John F. Ruston
Economic Analyst

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September 15, 1993

OVERVIEW

The federal adoption of a postconsumer definition and standard for recycled printing and writing paper signals to paper producers that in order to gain credit in the consumer marketplace for selling "recycled" paper, the recovered fiber used to make the paper must have a *direct* impact on the waste material that is now going to landfills and incinerators -- postconsumer paper. Use of the postconsumer definition in the proposed Executive Order also reaffirms the definition currently used in federal law (RCRA sec. 6002), 27 state procurement programs, the vast majority of private sector recycled paper purchasing initiatives and the current U.S. EPA recycled paper guidelines (which specify postconsumer content for all grades of paper other than printing and writing paper).

The current bottleneck to adding more postconsumer content to recycled paper is deinking capacity. There is currently ample supply -- in fact a glut -- of waste paper that with available technology can be used to make printing and writing paper with postconsumer recycled content. There is also substantial demand in the private market for printing and writing paper with recycled content. Deinking capacity can either be added at a paper mill or at a stand-alone facility that produces deinked market pulp. From the standpoint of a paper manufacturer, the marginal cost of producing pulp through deinking is significantly lower than producing virgin bleached kraft pulp.

Paper manufacturers produce products that meet the demands of their customers. In terms of technical feasibility, there is little difference in manufacturing paper with 10% or 20% postconsumer content. At any level of demand for recycled-content paper among private and government purchasers, a 20% standard will thus pull more postconsumer fiber into paper manufactured to meet market demand than a 10% standard. For example, filling an U.S. annual market demand for 3 million tons of recycled-content paper at a 20% standard would require 600,000 tons of postconsumer fiber; the same demand met at a 10% standard would only require 300,000 tons of postconsumer fiber. A higher standard will therefore increase the number of deinking plants that are installed to produce postconsumer fiber.

The importance of the federal standard for recycled content is that it sets the stage for the private marketplace, as producers of paper with recycled content seek to gain a competitive advantage in filling demand for their product by increasing the level of postconsumer content above the federal minimum. When the current U.S. EPA standard for printing and writing paper with 50% total recycled content was established in the late 1980's for example, the private market rapidly surpassed this with a defacto standard of 50% total recycled content, 10% postconsumer content.

There is ample evidence that paper producers are prepared to make recycled-content paper with postconsumer content levels much higher than 10%. For example, by November 1993, International Paper Co. will be producing 90,000 tons of 100% recycled photocopy paper per year at Lock Haven, PA, which will have a minimum 50% postconsumer content. The Union Camp Corp. is currently testing uncoated free sheet paper with 25% postconsumer content in anticipation of starting its 400 ton per day (input) deinking line at Franklin, VA in February 1995. International Paper Co. has announced that in 1995 it will complete installation of another 400 ton per day deinking line at its Selma, AL mill, which will produce recycled pulp equivalent to 18% of the mill's total paper production. Bank of America and Pacific Gas And Electric Co. have organized a group of almost 70 businesses that are committed to buying paper with a minimum of 15% postconsumer recycled content, and Bank of America itself is reportedly now buying paper with 20% postconsumer content.

In the long term, once the definition of recycled content is established, the role of the federal standard in the private market will diminish. Through the pricing mechanism, the private market will adjust and balance consumer demand for recycled paper, the available supply of recovered paper, and the increasing technical ability of paper manufacturers to use higher levels of postconsumer content. The Executive Order will not independently lead to long-term shortages of recovered paper, since the federal government is such a small part of the total U.S. market.

In the near term, the critical role for federal purchasing is to add certainty to the market for recycled-content paper, establish a uniform national definition of recycled content, address the immediate glut of recovered office paper, and stimulate investment in deinking facilities. Greater use of postconsumer fiber in printing and writing paper will create jobs in the collection and processing of recovered fiber and in the construction and operation of deinking plants, increase jobs and sales among the companies that manufacture paper recycling equipment, and turn a waste material that is costly to dispose of into a high value-added commodity. By specifying 20% postconsumer content for federal purchases of recycled printing and writing paper, the Executive Order can have a positive impact on both the economy and the environment.

WHY A 10% STANDARD IS INSUFFICIENT

- A. A 10% standard will result in less, not more, use of postconsumer paper than a 15% (or higher) standard, contrary to AFPA's claim.
1. AFPA's claim that a 10% standard will pull in more postconsumer paper than a 15% standard is predicated on its expanded "processed recovered fiber" definition. Note that AFPA's bar chart (attached to its 9/3/93 letter to President Clinton) does not indicate "pull" of postconsumer paper, only processed recovered fiber. AFPA's claim of increased participation under a lower standard is a function of how easy it is to use preconsumer materials, and does not reflect what is really needed: increased investment in deinking facilities required to use more postconsumer paper.
 2. AFPA's estimated pull of processed recovered fiber by 1995 is only 1.7 million tons; see AFPA's bar chart. This amount is less than the amounts of printed, printing-and-writing-paper-derived converting scrap and over-issue materials projected to be recovered in 1995: 1.84 million tons; see Chart 1 attached. In other words, *AFPA's own 1995 projection for use of processed recovered fiber could be met without using any postconsumer paper at all.*
 3. Similarly, consider what 50% industry conformance with a 10% processed recovered fiber standard would mean for use of recovered fiber: Of the 28 million tons of P&W paper projected to be produced in 1995, $28 \times 0.5 \times 0.1 = 1.4$ million tons of processed recovered fiber would be used under this standard -- again, less than a very conservative estimate of the amount of preconsumer paper suitable for use in P&W paper projected to be recovered by 1995.
 4. In terms of increasing industry participation, it is critical to recognize that the Executive Order's proposed standard eliminates the 50% total recovered material requirement. That requirement has been the real barrier impeding greater industry participation, and its removal is a major concession to industry. Relative to a 50% recovered material or a 50/10 standard (50% recovered material including 10% postconsumer paper), a single-tier postconsumer standard of 20% will make entry into the recycled P&W paper market easier.
 5. AFPA claims that "only five to ten commodity machines are likely to produce on a regular basis paper meeting the 15 percent level" (9/9/93 letter to President Clinton). There are several major flaws in this argument. First, at 15% postconsumer recycled content, ten commodity machines (which each typically produce about 250,000 tons of paper per year) would produce about 2.5 million tons per year of recycled-content paper -- more than eight times federal government purchases.

Second, the reference to commodity machines producing "on a regular basis" omits any paper producers that would choose to use deinked market pulp, which is produced offsite and can be used intermittently. Currently, AFPA's own data¹ indicate that 600,000 tons of deinked market pulp are available annually in the United States today -- enough to produce 4 million tons annually of P&W paper at a 15% postconsumer level, or 13 times federal government demand. By 1995 or shortly thereafter, annual production of more than 2 million tons of deinked market pulp is projected, tripling current capacity.

B. A 10% standard is a step *backward* from the *defacto* standard in the current market that reflects state and local government and private sector procurement standards and initiatives.

1. The *defacto* marketplace standard today is at least 50/10.

> State procurement standards adopted over the last 5 years generally specify at least this standard:

- 27 states specify postconsumer paper as part of their standards;
- 25 states require at least 10% postconsumer content along with at least 50% total recovered material;
- 2 states (RI, OR) require at least 25% postconsumer content along with at least 50% total recovered material.

> The Great Lakes Purchasing Cooperative purchased 14,000 tons of recycled copy paper last year on behalf of 7 midwest state governments. About half of that amount was 50/20 (from Badger Paper), the other half was 50/10 (from Hammermill/International Paper). A price premium of about 7% was paid. The success of the purchase has led to a decision to place a larger order involving more states this year. A Western States Contracting Alliance bid specifying 30,000 tons of paper in the range of 50/10 to 50/30 is currently in process.

> Bank of America and Pacific Gas & Electric Company have organized a group of almost 70 businesses committed to buying paper with at least 15% postconsumer content, and Bank of America itself is buying paper with 20% postconsumer content from James River Corporation.

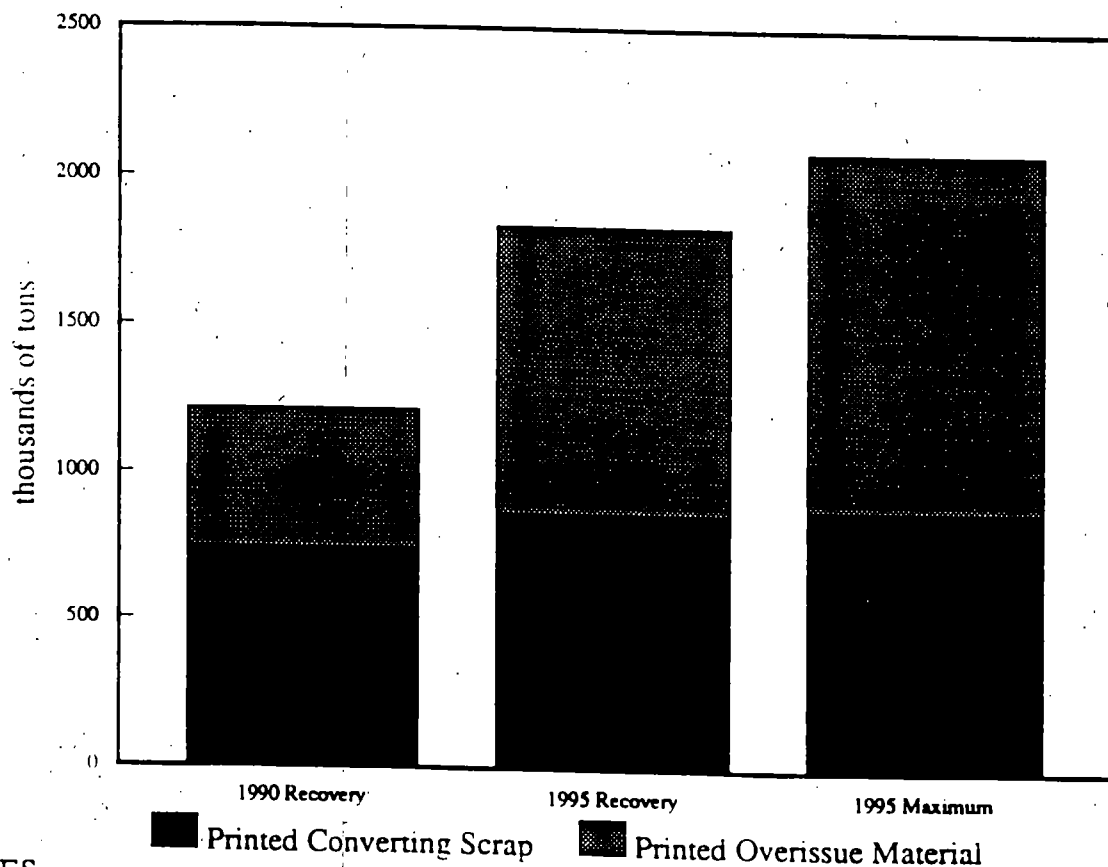
¹ AFPA, *Recovered Paper Deinking Facilities*, March 1993, AFPA Economics, Washington, DC. AFPA notes that its estimates are conservative.

- > About 400 brands of P&W paper meet a 50/10 standard today (Jaako-Poyry "Grade-Finder" listing).
 - > More than 100 brands made by at least 40 companies meet a 50/15 standard (CERMA and National Paper Trade Association Management News listings).
2. A federal 10% standard might have been seen as progressive several years ago; today it can only be described as lagging.
 3. Removing the 50 from the *de facto* marketplace standard of 50/10 to leave only a 10% postconsumer standard will undercut these state programs -- unless the 10 is raised to at least 20%. Nor will it result in use of more postconsumer paper.
- C. A 10% standard will not drive any expanded investment in deinking facilities, and therefore, the supply of postconsumer deinked pulp. The limiting factor to greater use of postconsumer paper in P&W paper is deinking capacity -- not raw material supply or paper machine limitations.**
1. Work by Franklin Associates (cited by AFPA in its 9/3/93 letter to President Clinton to support its contention that supply is the limiting factor) in fact states clearly that the limiting factor is deinking capacity: "The office paper collection infrastructure and actual collection are currently expanding faster than the paper mill capacity to utilize recovered office papers."²
- The report goes on to state: "The printing and writing paper industry is just beginning to make the necessary investments for usage of recovered office papers. There are new, and potentially strong, market forces driving the procurement of recycled printing-writing paper products. These market forces need to continue to grow to provide the economic incentives for recovered office waste paper usage in this industry."
2. The Franklin Associates report's estimate for recovery of P&W paper from offices in 1995 is 3.4 million tons -- double the "pull" of waste paper projected in the AFPA bar chart under its proposed 10% processed recovered fiber standard. This hardly represents a shortage in supply of recovered office printing and writing paper.

² Franklin Associates, *Supply of and Recycling Demand for Office Waste Paper, 1990 to 1995*, prepared for the National Office Paper Recycling Project, Final Report, July 1991, p. ES-4.

As shown in Charts 1 and 2, very conservative estimates indicate that at least half of all the P&W paper produced in the U.S. could be made to readily qualify as "recycled" under the AFPA definition (i.e., could contain 10% "processed recovered fiber" ("PRF")) using only preconsumer materials, that is, without using ANY post-consumer materials.

CHART 1
RECOVERY OF PRE-CONSUMER PAPER SUITABLE FOR USE IN P&W PAPER
1990 AND 1995



NOTES:

"1995 Maximum" quantities represent 100% recovery of the printed converting scrap and over-issue P&W-derived materials that are generated.

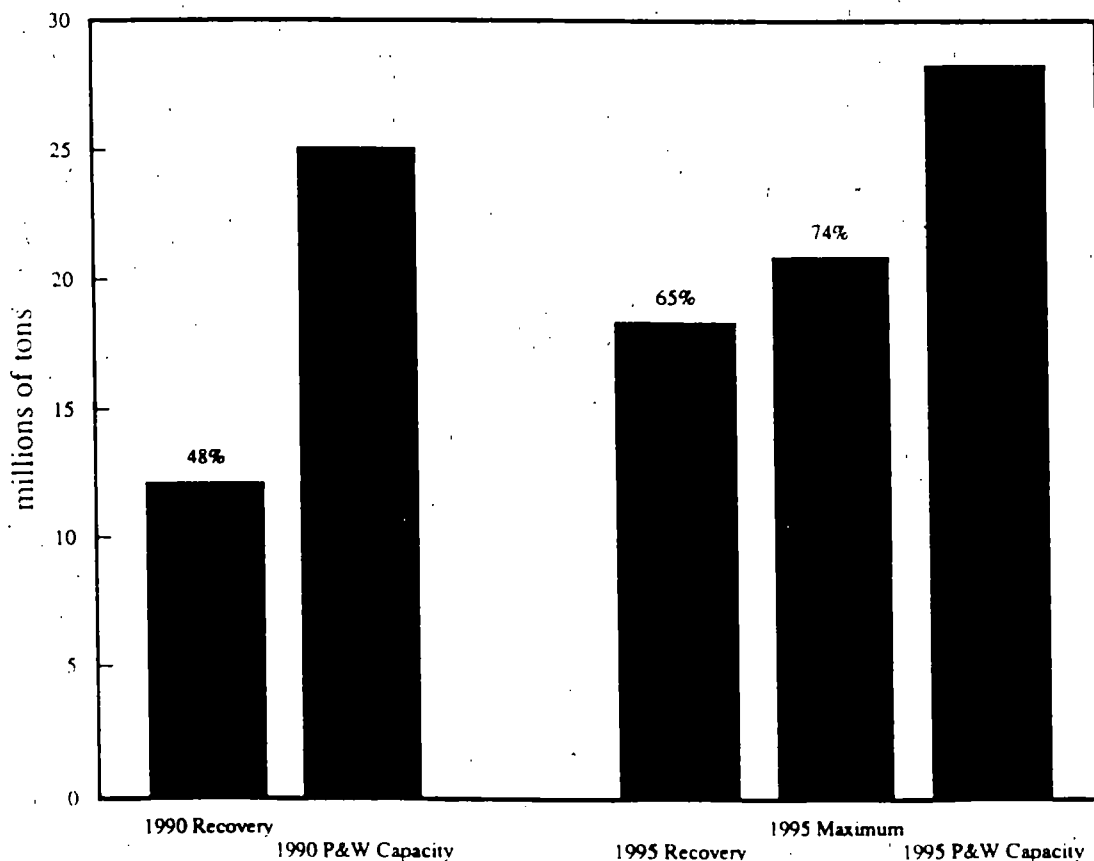
The recovery estimates are very conservative, as they do not include other potential sources of converting scrap and overissue that could qualify as "processed recovered fiber" as defined by the AFPA.

SOURCES: Franklin Associates. Evaluation of Proposed New Recycled Paper Standards and Definitions. January 27, 1992. prepared for the Recycling Advisory Council.

If the quantities of recovered preconsumer material indicated in Chart 1 are used to make deinked pulp and then used to make paper at a 10% PRF content level, the amount of such paper is approximately 10 times the total quantity recovered. Chart 2 shows that these amounts of "10% PRF" paper represent half (in 1990) to two-thirds (in 1995) of the total U.S. capacity for producing P&W paper.

CHART 2

POTENTIAL FOR PRODUCTION OF PAPER CONTAINING 10% PRF WITHOUT PCW
VS. TOTAL P&W PAPER PRODUCTION CAPACITY



SOURCES: Franklin Associates, Evaluation of Proposed New Recycled Paper Standards and Definitions, January 27, 1992, prepared for the Recycling Advisory Council; EDF calculations.



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THE EFFECT OF INCORPORATING POST-CONSUMER RECYCLED CONTENT ON THE PRICE OF PRINTING AND WRITING PAPER

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August 19, 1993

For the following reasons, the federal government should not have to pay more for printing and writing paper with post-consumer fiber content.

Three economic factors should make paper with post-consumer fiber competitive with paper made from virgin pulp. First, the market no longer supports price premiums for recycled paper; second, signals of sustained demand for recycled paper will encourage low-cost producers to make it; and third, deinked pulp using mixed office waste paper, the new raw material of choice, is less expensive to make than virgin pulp. In fact, the Government initiative will actually help to make recycled printing and writing papers more affordable and available to everyone.

I. Market forces are reducing the price premiums for recycled fiber papers.

According to the August 1993 issue of *Paper Recycler*, "[m]ost mills still seek a premium for recycled content papers, but for many grades those premiums have been dropping from a high of 10% to under 5%, and some are even being sold at comparable prices to virgin-fiber papers." These premiums exist because the small mills that make paper with post-consumer content have been able to find customers willing to buy their paper at high prices.

While deinked pulp has also been selling at a significant premium to virgin kraft pulp, there are several reasons why this is expected to change. Virgin pulp prices are currently depressed because of an over-supply. Almost 1 million tons of bleached kraft pulp capacity came on-line in both 1990 and 1991 in the U.S., just as market pulp prices declined precipitously and the economy entered a recession. With the worldwide glut of pulp and a

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weak global economy, virgin pulp prices have remained unusually low. For example, U. S. southern bleached kraft softwood pulp sells for \$375-395 per metric ton, down from \$555 per metric ton a year ago. The price of deinked market pulp, on the other hand, has held steady at around \$565 per metric ton for the last nine months (*Pulp and Paper Week*, July 19, 1993).

This price gap is expected to disappear soon. Virgin pulp prices will rebound as the economy recovers and marginally competitive mills cease production; some of the virgin capacity shutdowns may be permanent. Additional deinked pulp capacity expected to come on-line in the next two years will decrease its current high price. Thus, the cost of incorporating post-consumer fiber into paper made at those mills that currently purchase deinked market pulp will decrease.

2. **By demonstrating a sustained demand for paper with post-consumer fiber the Government will encourage the low-cost manufacturers to produce these papers on their state of the art machines.**

Mills that operate state-of-the art paper machines produce high quality paper at the lowest cost. Economies of scale drive paper manufacturing costs because the same number of people are needed to run a paper machine regardless of the size; thus, mills with the largest, fastest machines spread the labor costs over greater quantities of paper. This increased productivity results in significantly lower costs.

Because Union Camp and International Paper both plan to produce paper with post-consumer content on their fastest machines in 1995, the price should be competitive with paper made with virgin fiber.

3. **Incorporating post-consumer fiber actually lowers paper manufacturing costs.**

Two important components of the cost of paper -- capital costs and fiber costs -- are lower for deinked post-consumer fiber than they are for virgin bleached kraft pulp. Purchased energy and chemical costs are roughly the same.

Capital costs to build additional bleached kraft pulp capacity are roughly twice those to build a deinking plant that uses mixed office waste paper. Several estimates for capital costs needed to produce bleached kraft pulp are available and fairly consistent:

- *American Papermaker* (March, 1992) reports costs of \$630,000 to \$650,000 per daily ton of capacity of bleached kraft pulp.
- Estimates made by the investment firm Morgan Stanley put replacement costs at \$1.152 billion for the pulp mills that Weyerhaeuser purchased from Procter & Gamble in November 1992; these figures translate into a capital cost of \$600,000 per daily ton for bleached kraft pulp capacity.¹ ("Summary of 37 Major Paper Acquisitions," Morgan Stanley Equity Research Report, 1992).

- Morgan Stanley has also estimated the cost of additional capacity for virgin bleached market pulp to be \$550,000 per daily ton, based on major paper acquisitions that have taken place since September, 1988; its estimate for the period prior to September, 1988 was \$500,000 per daily ton (same source as previous bullet).

This range of capital costs -- \$550,000 to \$650,000 per daily ton of capacity for bleached pulp -- is more than twice as high as the \$275,000 per daily ton estimate for the capital cost of a deinking plant that uses mixed office waste (*Pulp and Paper Week*, November 2, 1992).

Fiber costs are the largest variable cost component in pulp production. Wood accounts for 30-35 percent of the total cost of making a ton of virgin bleached kraft pulp. For example, wood costs \$115 per ton for U.S. southern bleached pulp (*Pulp and Paper*, March 1992), the *lowest* cost pulp in North America. Fiber from mixed office waste, on the other hand, costs \$70 per ton of pulp.²

These favorable economics of using mixed office waste as a raw material have spurred the development of new deinking technologies that produce clean, bright pulp suitable for use in printing and writing papers.

ENDNOTES

1. Based on a production level of 1920 tons of pulp per day, 350 days per year.
2. Fiber cost is based on the cost of mixed office waste f.o.b. (\$30 per ton), transportation costs (\$20 per ton) and a pulping process yield of 70%.

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COMPARISON OF EDF AND AFPA ESTIMATES FOR POST-CONSUMER DEINKED PULP CAPACITY IN THE U.S.

August 6, 1993

Subsequent to preparing our July 29, 1993 analysis of the AFPA proposed definition and standard for government procurement of recycled printing and writing paper, we obtained a copy of a new (March 1993) report from AFPA listing existing and expected 1995 capacity for producing deinked pulp in the U.S. A copy of this report is attached.

We have compared the deinked pulp capacity estimate provided in our July 29 analysis to that in the AFPA report. The comparison indicates that, for total post-consumer deinked pulp capacity used or suitable for use in printing and writing papers, the AFPA estimates for both present capacity and capacity expected in 1995 are actually substantially greater than the conservative estimates we provided. A table is attached showing the comparison. More specifically we found the following:

1. EDF and AFPA estimates of existing deinked market pulp capacities are very similar. AFPA has included 3 extra mills for a total of 12 existing mills that produce deinked market pulp. Our capacity numbers differ by about 10%.
2. Relative to the EDF estimate for new market deinked pulp capacity, AFPA projects two additional deinking mills to come on-line by 1995 and that Ponderosa will increase capacity in its three existing deinked pulp mills. The AFPA estimate for deinked market pulp capacity in 1995 is thus almost 25% larger than ours.
3. The AFPA and EDF estimates differ significantly for existing deinked pulp capacity at integrated mills, with the AFPA estimate being much higher. The AFPA estimate includes all, not just post-consumer, deinked pulp capacity, however. In addition, some of these mills listed by AFPA are presently closed, and two of the operating mills produce groundwood deinked pulp, which we did not include in our estimate. EDF's estimates for deinked post-consumer pulp in this category were confirmed through telephone interviews with mill personnel, while AFPA's are based on published sources.

In sum, because AFPA's estimates for deinked pulp capacity are actually higher than EDF's, the industry's own figures support our contention that more than sufficient capacity currently exists in the U.S. to produce printing and writing paper meeting a 15% post-consumer recycled content standard.

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DEINKED PULP CAPACITY FOR PRINTING AND WRITING PAPERS IN THE U.S.
A COMPARISON OF EDF AND AFPA ESTIMATES
Present and expected additional capacity by 1995

DEINKED MARKET PULP

Company	Location	EDF estimate	AFPA estimate
		Annual deinked pulp capacity (1,2)	Annual deinked pulp capacity
		Thousands of tons	Thousands of tons
UNITED STATES 8/93			
Ponderosa	Santa Ana, CA	53	50
Ponderosa	Augusta, GA	63	60
Ponderosa	Oshkosh, WI	88	80
Ponderosa	Memphis, TN	84	75
Mississippi River	Natchez, MS	88	64
Prime Fiber	Appleton, WI	18	20
Kieffer Paper Mills	Brownstown, IN	39	40
Ecofibre/Riverside Paper	DePere, WI	35	35
Fox River	DePere, WI	77	70
FSC Paper Co.	Alsip, IL		10
Ohio Paper Mills Inc.	Cincinnati, OH		13
Reprocell	Sun Valley, CA		85
TOTAL 1993		543	602

UNITED STATES 1995

Dynaxis	Sanger, CA	53	53
Superior Recycled Fiber	Duluth, MN	88	90
Burrows Paper	Little Falls, NY	18	18
Pencor	Hagerstown, MD	140	100
Solar International Trading	Morrisville, PA	119	100
Minnesota Pacific	Port of Duluth, MN	70	
N. American Recycling Systems	Fort Edward, NY	105	105
Great Lakes Pulp & Fibre	Menominee, MI	175	175
Green Bear	Vancouver, WA	140	155
Ponderosa	Northampton, PA	140	135
American Power	Barrackville, WV	165	140
Caithness King Co.	Midland, MI		100
Fox River Fibre Co.	DePere, WI		70
International Resource Recycling	Camden, NJ		135
Mississippi River Corp.	Natchez, MS		100
Ponderosa	Oshkosh, WI		30
Ponderosa	Memphis, TN		8
Ponderosa	Augusta, GA		7
Stone & Webster	Auburn, ME		70
TOTAL UNITED STATES 1995		1,754	2,123

INTEGRATED DEINKED PULP CAPACITY (US ONLY)

Company	Location	EDF estimate	AFPA estimate
		Annual deinked pulp capacity (1)	Annual deinked pulp capacity
		Thousands of tons	Thousands of tons
CAPACITY AS OF 8/93 (3)			
Appleton Papers (4)	West Carrollton, OH	11	68
Boise Cascades (4)	Vancouver, WA	35	53
James River (4)	Halsey, OR	48	105
Cross Pointe (4)	West Carrollton, OH	19	54
Cross Point Paper Co. (4)	Park Falls, WI	--	9
Daishowa America Co., Ltd.	Port Angeles, WA	--	65
Georgia Pacific Corp. (5)	Kalamazoo, MI	--	70
International Paper (6)	Merrill, WI	--	20
Mead Corp.	Chillicothe, OH	--	18
Patriot Paper Co. (6)	Hyde Park, MA	--	80
P.H. Gladfelter Co. (7)	Neenah, WI	--	90
Simpson Paper Co. (6)	Pomona, CA	--	25
TOTAL INTEGRATED CAPACITY AS OF 8/93		112	657

INTEGRATED CAPACITY AS OF 1995

Cross Pointe	Park Falls, WI	18	35
Burrows Paper	Little Falls, NY	18	18
Union Camp	Franklin, VA	105	105
International Paper	Corinth, NY	18	
International Paper (5)	Lock Haven, PA		90

ADDITIONAL POTENTIAL CAPACITY AVAILABLE (8)

Appleton Papers	West Carrollton, OH	68	
James River	Halsey, OR	32	

TOTAL INTEGRATED CAPACITY AS OF 1995

TOTAL CAPACITY 8/93	655	1,259
TOTAL CAPACITY 1995	2,123	3,027

Sources: Recovered Paper Deinking Facilities March 1993, AFPA Economics; Pulp and Paper Week, 1992 North American Pulp and Paper Week, 1993 Lockwood-Post's Directory; Paper Recycler, March 1993; Resource Recycling, April 1993; interviews.

Notes:

- (1) All deinked fiber is post-consumer
- (2) Annual capacity is based on a 350 day year
- (3) Integrated deinked pulp is produced for internal consumption.
- (4) AFPA estimate includes pre-consumer or industrial waste paper
- (5) Deinked pulp is mostly groundwood
- (6) Mill is currently shut down
- (7) Mill produces no post-consumer deinked fiber
- (8) Additional potential capacity is capacity that can be switched to produce post-consumer deinked pulp should demand warrant it.

RECOVERED PAPER DEINKING FACILITIES

MARCH, 1993

**AMERICAN FOREST & PAPER ASSOCIATION
ECONOMICS & MATERIALS DEPARTMENT**

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RECOVERED PAPER DEINKING FACILITIES: A SPECIAL REPORT

The first section of this report contains a listing by company, location, product grade and estimated annual capacity of 74 existing recovered paper deinking facilities.

To preserve the confidentiality of statistical and capacity data supplied to AFPA by its members, the AFPA Economics & Materials Department has been careful to obtain all the information in this report from public sources. Consequently, the entries may not comprise a complete record of all deinking plants in the U.S. pulp and paper industry, and thus the report probably understates existing deinking capacity.

The second section of the report lists 51 publicly announced expansions or new recovered paper deinking facilities reported to be planned between 1993-1995. The list includes entries ranging from firm commitments to preliminary engineering and feasibility studies. No attempt has been made to judge the likelihood that any of these projects will be completed as described.

The table below summarizes the number of existing and planned projects by end product.

End Product	Existing	Planned
Newsprint	13	12
Paperboard	3	-
Printing/Writing	12	6
Tissue	32	8
Deinked Market Pulp	12	24
Deinked Pulp	2	1
Total	74	51

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SECTION I

Existing Recovered Paper Deinking Facilities

FEBRUARY 1993

RECOVERED PAPER DEINKING FACILITIES

Existing Facilities 1992

Information in this report is obtained from trade periodicals, company releases and other public sources. Entries may not comprise a complete record of all deinking plants in the pulp & paper industry.

MILL OR COMPANY NAME	LOCATION	STATE	PRODUCT GRADE ^{1/}	ESTIMATED ANNUAL DEINKING CAPACITY ^{2/} (thousands short tons)
Augusta Newsprint Co.	Augusta	GA	Newsprint	90
Bowater Inc.	Calhoun	TN	Newsprint	110
FSC Corp.	Alsip	IL	Newsprint	135
Garden State Paper Co.	Garfield	NJ	Newsprint	250
I Empire Co.	Millwood	WA	Newsprint	40
Jefferson Smurfit Corp.	Oregon City	OR	Newsprint	120
Jefferson Smurfit Corp.	Newberg	OR	Newsprint	220
Jefferson Smurfit Corp.	Pomona	CA	Newsprint	150
Kimberly-Clark Corp.	Coosa Pines	AL	Newsprint	40
Manistique Papers Inc.	Manistique	MI	Newsprint/Directory Papers	150
North Pacific Paper Co.	Longview	WA	Newsprint	165
Southeast Paper Co.	Dublin	GA	Newsprint	450
S Container Corp.	Snowflake	AZ	Newsprint	230
Celotex Corp.	Quincy	IL	Paperboard	17
Green Bay Packaging Inc.	Morrilton	AR	Paperboard	105
Newark Boxboard Corp.	Stockton	CA	Paperboard	6
Appleton Papers Inc.	West Carrollton	OH	Printing/Writing Papers	68
Boise Cascade Corp.	Vancouver	WA	Printing/Writing Papers	53
Cross Pointe Paper Co. (sub. Pentair)	Park Falls	WI	Printing/Writing Papers	9
Daishowa America Co., Ltd.	Port Angeles	WA	Printing/Writing Papers	65
Georgia-Pacific Corp.	Kalamazoo	MI	Printing/Writing Papers	70
International Paper Co.	Merrill	WI	Printing/Writing Papers	20
Mead Corp.	Chillicothe	OH	Printing/Writing Papers	18
Miami Paper Corp. (sub. Pentair)	West Carrollton	OH	Printing/Writing Papers	54
Patriot Paper Co.	Hyde Park	MA	Printing/Writing Papers	80
P.H. Glatfelter Co.	Neeah	WI	Printing/Writing Papers	90
Simpson Paper Co.	Pomona	CA	Printing/Writing Papers	25
Simpson Paper Co.	West Linn	OR	Printing/Writing Papers	n.a.
Ashuelot Paper Co.	Hinsdale	NH	Tissue	20
Atlas Paper Co.	Hialeah	FL	Tissue	18
American Tissue Corp.	Baldwinville	MA	Tissue	50
Bay West Paper Corp.	Middletown	OH	Tissue	90
Cascades Industries Inc.	Rockingham	NC	Tissue	20
Chesapeake Corp. (Wisconsin Tissue)	Menasha	WI	Tissue	200
Crystal Tissue Co.	Middletown	OH	Tissue	25
Encore Paper Co.	South Glens Falls	NY	Tissue	46
Erving Paper Mills	Erving	MA	Tissue	40
Flower City Tissue Mills	Rochester	NY	Tissue	10
Fort Howard Corp.	Muskogee	OK	Tissue	245
Fort Howard Corp.	Rincon	GA	Tissue	290
Fort Howard Corp.	Green Bay	WI	Tissue	420
FSC Corp.	Alsip	IL	Tissue	70
Georgia-Pacific Corp.	Gary	IN	Tissue	27
James River Corp.	Ashland	WI	Tissue	23
James River Corp.	Green Bay	WI	Tissue	70
James River Corp.	Carthage	NY	Tissue	14
Kimberly-Clark Corp.	Loudon	TN	Tissue	75
Laurel Hill Co.	Cordova	NC	Tissue	18
Marcus Paper Mills Inc.	Elmwood Park	NJ	Tissue	97
Orchids Paper Products	Flagstaff	AZ	Tissue	30

n.a. - not available

^{1/} - Conforms to product grades for paper and paperboard as published in AFPA annual Capacity Surveys.^{2/} - Estimated capacity to produce deinked pulp, not gross recovered paper consumption.

RECOVERED PAPER DEINKING FACILITIES

Existing Facilities 1992

MILL OR COMPANY NAME	LOCATION	STATE	PRODUCT GRADE ^{1/}	ESTIMATED ANNUAL DEINKING CAPACITY ^{2/} (thousands short tons)
Orchids Paper Products	Pryor	OK	Tissue	35
Paper Service Mills Inc.	Hinsdale	NH	Tissue	15
Pope & Talbot Inc.	Ransom	PA	Tissue	58
Pope & Talbot Inc.	Eau Claire	WI	Tissue	100
Pope & Talbot Inc.	Ladysmith	WI	Tissue	32
Putney Paper Co.	Putney	VT	Tissue	18
Scott Paper Co.	Winslow	ME	Tissue	50
Statler Tissue Corp.	Augusta	ME	Tissue	70
Stevens & Thompson Paper Co.	Greenwich	NY	Tissue	28
Tagsons Paper Co.	Mechanicville	NY	Tissue	71
EcoFibre Inc.	De Pere	WI	Deinked Market Pulp	35
FSC Paper Co.	Alsip	IL	Deinked Market Pulp	10
Fox River Fibre Co.	De Pere	WI	Deinked Market Pulp	70
Kieffer Paper Mills	Brownstown	IN	Deinked Market Pulp	40
Mississippi River Corp.	Natchez	MS	Deinked Market Pulp	64
Ohio Paper Mills Inc.	Cincinnati	OH	Deinked Market Pulp	13
Ponderosa Fibres of America Inc.	Oshkosh	WI	Deinked Market Pulp	80
Ponderosa Fibres of America Inc.	Memphis	TN	Deinked Market Pulp	75
Ponderosa Fibres of America Inc.	Augusta	GA	Deinked Market Pulp	60
Ponderosa Fibres of America Inc.	Santa Ana	CA	Deinked Market Pulp	50
Prime Fibre Corp.	Appleton	WI	Deinked Market Pulp	20
Reprocell	Sun Valley	CA	Deinked Market Pulp	85
James River Corp.	Halsey	OR	Deinked Pulp	105
Scott Paper Co.	Oconto Falls	WI	Deinked Pulp	n.a.

n.a. - not available

^{1/} - Conforms to product grades for paper and paperboard as published in AFPA annual Capacity Surveys.

^{2/} - Estimated capacity to produce deinked pulp, not gross recovered paper consumption.

SECTION II

Publicly Announced Recovered Paper

Deinking Facility Expansions and

New Projects

1993 - 1995

ECONOMICS DEPARTMENT

FEBRUARY 1993

RECOVERED PAPER DEINKING FACILITIES Publicly Announced Expansions and New Projects 1993 - 1995

Information in this report is obtained from trade periodicals, company press releases and other public sources. Entries include projects ranging from firm commitments to engineering and feasibility studies.

MILL OR COMPANY NAME	LOCATION	STATE	PRODUCT GRADE ^{1/}	ESTIMATED ANNUAL DEINKING CAPACITY (thousands short tons)	ANNOUNCED START-UP DATE ^{2/}	COMMENTS
Alabama River Newsprint Co.	Claiborne	AL	Newsprint	55	1993	Flotation deinking plant. 20-40% recycled content sheet.
Augusta Newsprint Co.	Augusta	GA	Newsprint	45	1993	Expansion.
Bear Island Paper Co.	Ashland	VA	Newsprint	45	1993	New flotation deinking plant. 20% recycled content sheet.
Boise Cascade Corp.	West Tacoma	WA	Newsprint	75	1993	Flotation deinking plant. 40% recycled content sheet.
Bowater Inc.	East Millinocket	ME	Newsprint	100	1993	New flotation deinking plant. 40% recycled content sheet.
Chion International Corp.	Sheldon	TX	Newsprint	140	1993/1995	Flotation deinking plant. 40% recycled content sheet.
Daishowa America Ltd. (Sub. San Joaquin Paper Co.)	Stockton	CA	Newsprint	250	n.a.	Proposal for 100% recycled mill.
Evergreen Pulp & Paper Co.	Redrock	AR	Newsprint	250	1995/1996	Plan for new mill and flotation deinking plant. 100% recycled sheet. Tentative.
MacMillan Bloedel/Haindl Paper	W. Sacramento	CA	Newsprint	310	n.a.	New mill and flotation deinking plant. 100% recycled sheet. Originally planned for 1994.
Ponderosa Fibres of America Inc.	Albany	NY	Newsprint	105	n.a.	New mill and flotation deinking plant. 100% recycled sheet. Originally planned for 1993.
Ponderosa Fibres of America Inc.	South Bronx	NY	Newsprint	105	n.a.	New mill and flotation deinking plant. 100% recycled sheet. Originally planned for 1993.
Stone-Consolidated Inc.	Shawinigan	Canada	Newsprint	80	1993	Flotation deinking plant. Fiber source mostly N.E. USA.
Cross Pointe Paper Co. (Sub. Pentair)	Park Falls	WI	Printing/Writing	35	1993	Deinking plant expansion.
Fox River Paper Co.	Urbana	OH	Printing/Writing	n.a.	n.a.	Studying deinking plant. Possible joint venture.
International Paper Co.	Corinth	NY	Printing/Writing	n.a.	1993	New deinking plant. Up to 50% post-consumer sheet.
International Paper Co.	Lock Haven	PA	Printing/Writing	n.a.	1993	New modified flotation deinking plant. May ship excess production.
Stora Papyrus Newton Falls Inc.	Newton Falls	NY	Printing/Writing	n.a.	n.a.	Studying deinking plant reactivation.
Union Camp Corp.	Franklin	VA	Printing/Writing	105	1994	Studying deinking plant. Up to 50% post-consumer sheet.
Ashuelot Paper Co.	Hinsdale	NH	Tissue	n.a.	1993	Upgrade deinking plant.
Encore Paper Co.	South Glens Falls	NY	Tissue	20	1993	Expansion.
Fort Howard Corp.	Western U.S.		Tissue	n.a.	n.a.	Considering new recycling mill and deinking plant.
Fort Howard Corp.	Muskogee	OK	Tissue	65	1994	Install fifth p.m.
Fort Howard Corp.	Rincon	GA	Tissue	65	1995	Install fifth p.m.
James River Corp.	Green Bay	WI	Tissue	18	1993	Considering deinking plant expansion and pulp mill shutdown.
James River Corp.	Old Town	ME	Tissue	n.a.	n.a.	Considering new p.m. and deinking plant. Originally planned for 1992.
Scott Paper Co.	Owensboro	KY	Tissue	n.a.	1995	Considering new mill and deinking plant.

n.a. - not available

1/ - Conforms to product grades for paper and paperboard as published in AFPA annual Capacity Surveys.

2/ - Learning curve and other factors may delay full utilization until following year.

CAP 1:010DE151.WP

RECOVERED PAPER DEINKING FACILITIES
Publicly Announced Expansions and New Projects 1993 - 1995

Information in this report is obtained from trade periodicals, company press releases and other public sources. Entries include projects ranging from firm commitments to engineering and feasibility studies.

PLANT OR COMPANY NAME	LOCATION	STATE	PRODUCT GRADE ^{1/}	ESTIMATED ANNUAL DEINKING CAPACITY (thousands short tons)	ANNOUNCED START-UP DATE ^{2/}	COMMENTS
American Paper Corp.	Barrackville	WV	Deinked Market Pulp	140	1994/1995	New mill and deinking plant.
Burrows Paper Corp.	Little Falls	NY	Deinked Market Pulp	35	1993	New deinking plant. 100% mixed office waste. For own use and sale to tissue and p/w mills.
Gaithers King Co.	Midland	MI	Deinked Market Pulp	100	1994/1995	Considering new mill and flotation deinking plant. Delayed from 1992.
DeNovo/Southern Electric	Fredericksburg	VA	Deinked Market Pulp	50	1994	Feasibility study. Will supply pulp for tissue mills.
DeNovo/Southern Electric	Seattle/Tacoma	WA	Deinked Market Pulp	53	n.a.	Proposal for new recycling/cogeneration plant.
Dynalene Inc.	Sanger	CA	Deinked Market Pulp	53	1993	Plan for new Recoupe steam explosion plant in existing power plant.
FSC Paper Co.	Alsip	IL	Deinked Market Pulp	20	n.a.	Considering expansion.
Fox River Fibre Co.	De Pere	WI	Deinked Market Pulp	70	1993/1994	Considering doubling capacity in new mill.
Great Lakes Pulp & Fibre Inc.	Menominee	MI	Deinked Market Pulp	175	1994/1995	Plan for new mill. 100% office waste.
Green Bear Inc.	Vancouver	WA	Deinked Market Pulp	155	1995	Proposal for 100% post-consumer wet lap mill.
International Resource Recycling	Camden	NJ	Deinked Market Pulp	135	1993/1994	Plan for new mill.
Mississippi River Corp.	Natchez	MS	Deinked Market Pulp	100	1993/1995	Three-year expansion program.
North American Recycling Systems	Fort Edward	NY	Deinked Market Pulp	105	1994	Plan for new mill to supply tissue producers.
Pfizer Inc.	Hagerstown	MD	Deinked Market Pulp	100	1994	New mill. Stake/Recoupe process using mixed office waste.
Ponderosa Fibres of America Inc.	Oshkosh	WI	Deinked Market Pulp	30	1992/1993	Mill expansion.
Ponderosa Fibres of America Inc.	Memphis	TN	Deinked Market Pulp	8	1992/1993	Mill expansion.
Ponderosa Fibres of America Inc.	Augusta	GA	Deinked Market Pulp	7	1993	Mill expansion.
Ponderosa Fibres/U.S. Generating Co.	Northampton	PA	Deinked Market Pulp	135	1994/1995	New mill and cogeneration plant.
Prime Fibre Corp.	Appleton	WI	Deinked Market Pulp	20	1993/1995	Three-year expansion program.
Resource Conversion Systems Inc.	Maywood	IL	Deinked Market Pulp	n.a.	n.a.	Possible mini-mill in town industrial park.
Solar International Trading Corp.	Morrisville	PA	Deinked Market Pulp	100	1994	Plan for new mill. 80% for sale to tissue mills, 20% export.
Steris & Webster Inc.	Auburn	ME	Deinked Market Pulp	70	1994	New mill. Pulp for sale to printing/writing mills.
Superior Recycling Co. (Minnesota Power/Pentair)	Duluth	MN	Deinked Market Pulp	90	1993	New mill will produce high quality pulp from office waste.
Chesapeake Corp./De Novo Corp.	West Point	VA	Deinked Pulp	53	1993	Considering new Stake/Recoupe process deinking plant. Possible market sale.

n.a. - not available

^{1/} - Conforms to product grades for paper and paperboard as published in AFPA annual Capacity Surveys.
^{2/} - Learning curve and other factors may delay full utilization until following year.



Natural Resources
Defense Council

DEINKED MARKET PULP PRODUCERS, EXISTING @ 100% P.C.

COMPANY/LOCATION	DEINKED PULP CAPACITY (SHORT TPD)	INITIAL STARTUP DATE
Ponderosa, Santa Ana, Calif.	150	1966
Ponderosa, Augusta, Ga.	180	1970
Ponderosa, Oshkosh, Wis.	250	1972
Ponderosa, Memphis, Tenn.	240	1974
Desencrage Cascades, Breakeyville, Que.	110	1986
Mississippi River, Natchez, Miss.	160	1993
Kieffer Paper Mills, Brownstown, Ind.	110	1992
EcoFibre/Riverside Paper, De Pere, Wis.	75	1993
Fox River, De Pere, Wis.	220	1992
Total 1,495/day		

**Equals 523,250 tons/year @ 100% P.C.
available now: > 1 mil. tons/year at 50%.**



Natural Resources
Defense Council

POTENTIAL VENTURES IN NORTHEASTERN U.S.

(Project financed depends on demand)

		<u>Tons/Day</u>
IRC - Fitchburg, Massachusetts	Project financed	400
Pejepscot - Topsham, Maine	Project financed	400
Stone and Webster - Auburn, Maine	Project financed	200
Wheelabrator - Concord, New Hampshire	Project financed	200
Ponderosa - Allentown, Pennsylvania	Corporate/Project financed	400
North American Recycling - Troy, New York	Project financed	300
Solar - Morrisville, Pennsylvania	Project financed	350
Delaware River Pulp - Camden, New Jersey	Project financed	300
Statler - Expansion in Augusta, Maine		150
Minnesota Pacific - N.E. U.S.	Project financed	400
Confidential Project - New York	Corporate/Project financed	<u>400</u>
	TOTAL	3500

Total wastepaper economically available in the Northeast will support 800 tons/day - 1000 tons/day new capacity (S.D. Warren estimate).

Dana
Mareva 260-4711

DRAFT

August 3, 1993

1:00 p.m.

EXECUTIVE ORDER

What is the
Status of Executive Order 12780?

FEDERAL ACQUISITION, RECYCLING, AND WASTE PREVENTION

① Waste Reduction
and Recycling
② Recycled Products
RCRA

WHEREAS, the Nation's interest is served when the Federal Government can make more efficient use of natural resources to enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources;

③ Recycling
Coordinators

WHEREAS, this Administration is determined to strengthen the role of the Federal Government as an enlightened, environmentally conscious and concerned consumer;

④ Council on
Federal
Recycling
and
Procurement
Policy

WHEREAS, the Federal Government should -- through cost-effective waste prevention and recycling activities -- work to conserve disposal capacity, and serve as a model in this regard for other private and public institutions; and

WHEREAS, the use of recycled and environmentally preferable products and services by the Federal Government can spur private sector development of new technologies, use of such products and, thus, create business and employment opportunities, enhancing regional and local economies and the national economy;

NOW, THEREFORE, I, WILLIAM J. CLINTON, by the authority vested in me as President by the Constitution and the laws of the United States of America, including the Solid Waste Disposal Act, Pub. L. No. 89-272, 79 Stat. 997, as amended by the Resource Conservation and Recovery Act (RCRA), Pub. L. No. 94-580, 90 Stat. 2795 (1976) as amended (42 U.S.C. 6901-6907), and section 301 of title 3, United States Code, hereby order as follows:

PART 1 - PREAMBLE

Section 101. Consistent with the demands of efficiency and cost effectiveness, the Head of each Executive agency shall incorporate waste prevention and recycling in the agency's daily operations and work to increase and expand markets for recovered materials through greater Federal Government preference and demand for such products.

Brace
well

Sec. 102. Consistent with policies established by Office of Federal Procurement Policy (OFPP) Policy Letter 92-4, agencies

shall comply with Executive Branch policies for the acquisition and use of environmentally preferable products and services and implement cost-effective procurement preference programs favoring the purchase of these products and services.

Sec. 103. The objectives of this order are to create an ongoing ~~Council on Environmental Progress~~ and to establish high-level Environmental Executive positions within each agency to be responsible for expediting the implementation of existing statutes and this order.

What does this mean?
High-level Environmental Executive Positions

PART 2 - DEFINITIONS

For purposes of this order:

Sec. 201. "Environmentally preferable" means products or services that reduce effects to human health and the environment in comparison with competing products or services which serve the same purpose. This comparison may consider production packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

Apparently, chlorine is here somewhere. But why not other products that are less hazardous, as well as chlorine free

Sec. 202. "Executive agency" or "agency" means an Executive agency as defined in 5 U.S.C. section 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

Broad definition

Sec. 203. "Postconsumer Materials" mean materials or finished products that have served their intended use and have been discarded for disposal or recovery, having completed their life as a consumer item. Postconsumer materials are a part of the broader category of "recovered materials".

Sec. 204. "Acquisition" means the acquiring by contract with appropriated funds for supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are

already in existence or must be created, developed, demonstrated and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance,

Extended Page 6.1

contract administration and those technical and management functions directly related to the process of fulfilling agency needs by contract.

Sec. 205. "Recovered materials" means waste materials and by-products which have been recovered or diverted from solid waste, but such term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process (42 U.S.C. 6903 (19)).

Sec. 206. "Recyclability" means the ability of a product or material to be recovered from, or otherwise diverted from, the solid waste stream for the purpose of recycling.

Sec. 207. "Recycling" means the diversion of materials from the solid waste stream and the conversion of those materials into beneficial use. Recycling is further defined as the result of a series of activities by which materials that would become or otherwise remain waste, are diverted from the solid waste stream by collection, separation or processing and are used in the manufacture of products sold or distributed in commerce.

Sec. 208. "Waste prevention," also known as source reduction, means any change in the design, manufacturing, purchase or use of materials or products (including packaging) to reduce their amount or toxicity before they become municipal solid waste. Waste prevention also refers to the reuse of products or materials.

Sec. 209. "Waste reduction" refers to preventing and/or decreasing the amount of waste being generated either through waste prevention, and recycling, or purchasing recycled and environmentally preferable products.

Sec. 210. "Life Cycle Cost" means comparing the total cost (capital costs, including installation, plus maintenance costs) over one product's expected lifetime to the total costs of a competing product over its expected lifetime.

Sec. 211. "Life Cycle Analysis" means the comprehensive examination of environmental effects throughout a products life

including new material extraction, transportation, manufacturing, use, and disposal.

[Sec. 212. "Total chlorine-free" refers to products produced without the introduction of any chlorine-containing compounds in the pulping and bleaching process.]

PART 3 - THE ROLE OF THE COUNCIL ON ENVIRONMENTAL PROGRESS
AND THE DESIGNATION OF ENVIRONMENTAL EXECUTIVES

Sec. 301. The Council on Environmental Progress. A Council on Environmental Progress (Council) is hereby established. It shall be comprised of the Federal Environmental Executive, a representative from the White House Office on Environmental Policy, the Administrator for Federal Procurement Policy, and the Environmental Executive from each of the following agencies: the Environmental Protection Agency, the Department of Defense, the General Services Administration, the National Aeronautics and Space Administration, the Department of Energy, the Department of Commerce, the Department of the Interior and the Department of Agriculture.

(a) Authority. The Federal Environmental Executive shall serve in a full time capacity as the Chair of the ^{Task Force} ~~Council~~ and after consultation with the Council, may add additional agency environmental executives as representatives to the ^{Task Force} ~~Council~~.

(b) Administration. Agencies are requested to make their services, personnel and facilities available to the ^{Task Force} ~~Council~~ to the maximum extent practicable for the performance of functions under this order.

(c) Committees and Work Groups. As committees and work groups are established by the ^{Task Force} ~~Council~~ to fulfill its goals and responsibilities, agencies are requested to designate appropriate personnel in the areas of procurement and acquisition, standards

and specification, electronic commerce, facilities management, waste prevention and recycling, and others as needed to staff and work on the initiatives of the ^{Task Force} ~~Council~~. The committee and work groups shall identify, assess, and recommend actions to be taken to fulfill the goals, responsibilities and initiatives of the ^{Task Force} ~~Council~~.

What is the status of such technology and how does it relate to recycling?

Task Force

(d) Duties. The ~~Council on Environmental Progress~~ shall:

(1) identify and recommend initiatives for Government-wide implementation that will promote the purposes of this order, including:

(A) the development of a Federal plan for agency implementation of this order and appropriate incentives to encourage the acquisition of recycled and environmentally preferable products by the Federal Government;

(B) the development of a Federal implementation plan and guidance for instituting economically efficient Federal waste prevention, energy and water efficiency programs, and recycling programs within each agency;

(C) the development of a plan for making maximum use of available funding assistance programs;

(2) collect and disseminate information electronically concerning methods to reduce waste, materials that can be recycled, costs and savings associated with waste prevention and recycling, and current market sources of products that are environmentally preferable or produced with recovered materials;

(3) provide guidance and assistance to the agencies in setting up and reporting on standardized agency programs and monitoring their effectiveness; and

(4) coordinate appropriate Government-wide education and training programs for agencies.

(e) Federal Environmental Executive. The Federal Environmental Executive ^{shall be} ~~as~~ designated by the President ~~shall be~~ ^{generate an annual} ~~located within the EPA, and shall review and report annually to~~ OMB, at the time of agency budget submissions, on the actions taken by the ~~Council~~ and by the agencies to comply with the requirements of this order.

Extended Page 8.1

(f) Staffing. A minimum of four (4) full time staff are to be provided by members of the ^{Task Force} ~~Council~~ to assist the Federal Environmental Executive, one of whom shall have experience in specification review and program requirements, one of whom shall

This seems to be a large resource committed

have experience in procurement practices, and one of whom shall have experience in solid waste prevention and recycling. [These four staff shall be appointed and replaced as follows:

(1) a representative from the Department of Defense shall be detailed for not less than one year and no more than two years;

(2) a representative from the General Services Administration shall be detailed for not less than one year and no more than two years;

(3) a representative from the Environmental Protection Agency shall be detailed for not less than one year and no more than two years;

(4) a representative from one of the other agencies serving on the Council shall be detailed on a rotational basis for not more than one year.]

Sec. 302. Agency Environmental Executives. Within 90 days after the effective date of this order, the Head of each Department and major procuring agency shall designate an Agency Environmental Executive from among its staff, who shall be placed no lower than at the Deputy Assistant Secretary level or equivalent. The Environmental Executive will be responsible for:

(a) coordinating all environmental programs in the areas of procurement and acquisition, standards and specification review, facilities management, waste prevention and recycling, and logistics;

(b) participating in the interagency development of a Federal plan to

(1) create an awareness and outreach program for the private sector to facilitate markets for environmentally preferable and recycled products and services, promote new technologies, improve awareness about Federal efforts in this area, and expedite

agencies efforts to procure new products identified under this order;

(2) establish incentives, provide guidance and coordinate appropriate educational programs for agency employees; and

(3) coordinate the development of standard agency reports required by this order.

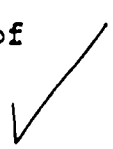
(c) reviewing agency programs and acquisitions to ensure compliance with this order.

Sec. 303. Agency Recycling Coordinators. Agency Recycling Coordinators designated by the Agency Environmental Executive shall be responsible for coordinating the development of an effective agency waste prevention and recycling program and emphasizing agencies' purchase and use of recycled and environmentally preferable products and services.

What
previously
exists?

PART 4 - ACQUISITION PLANNING AND AFFIRMATIVE PROCUREMENT PROGRAMS

Sec. 401. Acquisition Planning. Agencies developing plans, drawings, work statements, specifications, or other product descriptions shall consider the following factors: elimination of virgin material requirements; use of recovered materials; reuse of product; life cycle cost; recyclability; use of environmentally preferable products; waste prevention (including toxicity reduction or elimination); and ultimate disposal as appropriate. These factors should be considered in acquisition planning for all procurements and in the evaluation and award of contracts, as appropriate. [Program and acquisition managers should take an active role in these activities.]



Sec. 402. Affirmative Procurement Programs. The Head of each Executive agency shall develop and implement affirmative procurement programs in accordance with RCRA section 6002 (42 U.S.C. 6962) and this order. Agencies shall ensure that responsibilities for preparation and implementation of affirmative procurement programs are shared between the program and requiring activity personnel and procurement personnel. A process shall be developed by the agencies to ensure implementation and monitoring of the affirmative procurement programs by the program, requiring activity and procurement personnel.

(a) Agencies shall establish affirmative procurement programs for all designated EPA guideline items purchased by their agency. For newly designated items, agencies shall revise their internal programs within one year from the date EPA designated the new items.

(b) For each of the currently designated EPA guideline items, [concrete and cement containing fly ash; recycled paper products; re-refined lubricating oil; retread tires; and insulation containing recovered materials;] and for all future guidelines, agencies shall ensure that their affirmative procurement programs require that [100 percent of] their purchases of products meet or exceed the EPA guideline standards to the contracting officer unless written justification is provided that a product is not available competitively within a reasonable timeframe, does not meet appropriate performance standards, or is not available at a reasonable price.

This is a resource intensive suggestion with 17
[(c) The ~~Council on Environmental Progress~~ will ^{track} review and ~~monitor~~ agencies ~~annual~~ purchases of ^{EPA} designated EPA guideline items, and provide written ^{justification} notice to the Agency Environmental Executives when their agencies fail to purchase or to justify their reasons for not purchasing these items. Agency Environmental Executives ^{will} ~~be~~ ^{then} required to ^{justify} ~~report~~ to the ^{Task Force} ~~Council~~ on why the item(s) have not been purchased ^{or submit} ~~along with~~ a plan for how the agency intends to increase its purchases of designated item(s).]

[(d) Agency affirmative procurement programs shall encourage that documents be transferred electronically to the maximum extent practicable and when ^{appropriate} ~~necessary~~.

(1) to the maximum extent practicable, that all government documents printed internally be printed double-sided, and

(2) to the maximum extent practicable, that contracts, grants, and cooperative agreements issued after the effective date of this order, include provisions that require documents to be printed double-sided on recycled paper meeting or exceeding

the standards established in this order or in future EPA guidelines.)

Sec. 403. Procurement of Existing Guideline Items. Within 90 days after the effective date of this order, the head of each Executive agency, that has not implemented an affirmative procurement program, shall ensure that the affirmative procurement program has been issued in final and is being implemented to the maximum extent practicable.

Sec. 404. Electronic Acquisition System. To reduce waste by eliminating unnecessary paper transactions in the acquisition process, and to foster accurate data collection and reporting of agencies' purchases of recycled and environmentally preferred products, the Administrator for Federal Procurement Policy shall provide policy guidance for the development and implementation of a Government-wide electronic acquisition system. The system shall facilitate the electronic interchange of standard acquisition information between government and industry.

(a) Within 180 days after the effective date of this order, the OFPP Administrator, in consultation with major procuring agencies, shall provide specific guidance on the development and implementation of the system to Executive agencies.

(b) To support this system, the ^{EPA and} GSA Administrator^s in coordination with the Secretary of Defense and other appropriate agency heads, shall establish and maintain a publicly-accessible electronic database highlighting recycled and environmentally preferable products, that includes applicable commercial item descriptions (CIDs), standards and specifications.

> (C) Classified procurement exemption should be maintained
PART 5 - STANDARDS, SPECIFICATIONS AND DESIGNATION OF ITEMS

Sec. 501. Specifications, Product Descriptions and Standards. [Where applicable,^{OK}] executive agencies shall ~~as soon as practicable,~~ review and revise Federal and military specifications, product descriptions and standards to enhance Federal procurement of products made from recovered materials or that are environmentally preferable. When converting to a CID, agencies shall ensure that environmental factors have been

See below

(C) This electronic acquisition system shall not be used for classified procurements.

considered and that the CID meets or exceeds the environmentally preferable criteria of the government specification or product description. Agencies shall report annually on their compliance with this section in the report specified in section 604.

(a) If an inconsistency with RCRA Section 6002 or this order is identified in a specification, standard, or product description, the Council ^{shall} ~~may~~ request that the ^{Environmental Executive of that} ~~agency responsible~~ ^{on} ~~for the specification~~ advise the Council ^{why} the specification ^{can} ~~should not~~ be revised, *OR submit a plan for revising it within 60 days.*

(b) If an agency should be able to revise an inconsistent specification but cannot do so within 60 days, it is the responsibility of that agency's Environmental Executive to monitor and enforce ^{the} ~~a plan to achieve consistency.~~ ^{for revising it.}

[Sec. 502. Designation of Items that contain Recovered Materials or are Environmentally Preferable.] In order to expedite the process of designating items that are or can be made with recovered materials, EPA shall institute a new process for designating items under RCRA section 6002. In accordance with this order, EPA shall also identify and develop guidance for items that are environmentally preferable.

(a) In accordance with RCRA section 6002(e), EPA shall issue a Comprehensive Procurement Guideline designating items that are or can be made with recovered materials.

(1) The proposed guideline shall be published for comment in the Federal Register within 180 days after the effective date of this order and shall be updated annually thereafter to include additional items.

(2) Concurrently, EPA shall publish in the Federal Register Procurement Advisory Notice(s) that recommend recovered material content levels within which the designated recycled items are currently available. These recommended levels shall be updated periodically to reflect changes in market conditions.

(3) Once items containing recovered materials have been designated by EPA through the new guideline process, agencies shall procure these items to the maximum extent practicable and

modify their affirmative procurement programs to include these items in compliance with RCRA section 6002 and this order.

(b) In accordance with this order, EPA shall issue guidance identifying items that are environmentally preferable.

(1) The proposed guidance shall be published for comment in Federal Register within 180 days after the effective date of this order and shall be updated annually thereafter to include additional items.

(2) Once items that are environmentally preferable have been identified by EPA, agencies shall procure these items to the maximum extent practicable and modify their procurement programs to include these items.]

[Sec. 503. Minimum Content Standard for Printing and Writing Papers. Executive agency heads shall ensure that by January, 1995, agencies shall meet or exceed the following minimum recovered materials content standards when purchasing or causing the purchase of printing and writing papers:

(a) For high speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, and white woven envelopes, the minimum content standard shall be no less than 15 percent postconsumer recovered materials. This minimum content standard shall be increased to 25 percent beginning in January 1999.

(b) For other uncoated printing and writing papers, such as writing and office papers, book paper, cotton fiber paper, and cover stock, the minimum content standard shall be 50 percent recovered materials, including 15 percent postconsumer materials. The postconsumer recovered materials content shall be increased to 25 percent beginning in January 1999.

(1) The decision not to procure ^{recycled} printing and writing paper meeting the standards specified in this section shall be based ^{solely} on a determination by the contracting officer that a satisfactory level of competition does not exist, that the items are not available within a reasonable amount of time,

or that the available items fail to meet reasonable performance standards established by the agency.

(2) ~~If cost increases result from purchasing recycled printing and writing paper,~~ Each agency should implement waste prevention techniques ^{as specified in section 402 (d)} ~~(e.g., double-sides copying, electronic communications)~~ so that total annual expenditures for ^{recycled} printing and writing papers do not exceed ^{current} typical annual budgets for ^{Paper products,} ~~these products~~ ~~e.g.,~~ as measured by average annual expenditures adjusted for inflation ^{based on} ~~as measured by~~ the Consumer Price Index or other suitable index). In determining a target budget for printing and writing papers, agencies may take into account such factors as employee increases or decreases, new agency or statutory initiatives, and episodic or unique requirements (e.g., census).]

[Sec. 504. Procurement of Re-refined Lubricating Oil and Retread Tires. Within 180 days after the effective date of this order, agencies shall implement the EPA procurement guidelines for re-refined lubricating oil and retread tires.

(a) Commodity managers shall finalize revisions to specifications for re-refined oil and retread tires, and develop and issue specifications for tire retreading services, as commodity managers shall take affirmative steps to procure these items in accordance with RCRA section 6002.

(b) Once these items become available, fleet managers shall take affirmative steps to procure these items in accordance with RCRA section 6002.]

[Sec. 505. Product Testing. The Secretary of Commerce, through ~~shall maintain the capability within~~ the National Institute of Standards and Technology (NIST), ^{shall establish a} ~~for a laboratory accreditation~~ program for testing the performance of products containing recovered materials or deemed to be environmentally preferable. ~~NIST shall review and update technical information and data on product tests and standards in conjunction with EPA's issuance of guidelines.~~ NIST shall work with EPA ^{GSA} and other public and private sector organizations that conduct appropriate life cycle

analyses to gather information that will assist agencies in making selections of product and services that are environmentally preferable.

(a) NIST shall coordinate with other Executive and State agencies to avoid duplication with ~~other laboratory accreditation~~ ^{existing} testing programs.

(b) NIST shall publish appropriate reports describing ~~the~~ ^{their} testing ~~accreditation~~ programs, ~~its~~ results, and recommendations for test methods and related specifications for use by Executive agencies and other interested parties.]

PART 6 - AGENCY GOALS AND REPORTING REQUIREMENTS

Sec. 601. Goals for Waste Reduction. Each agency shall establish a goal for solid waste prevention and a goal for recycling to be achieved by the year 1995. These goals shall be submitted to the ~~Council on Environmental Progress~~ within 180 days after the effective date of this order. Progress on attaining these goals shall be reported by the agencies to the Council in the annual report specified in Sec. 604.

Sec. 602. Goal for Increasing the Procurement of Recycled and Other Environmentally Preferable Products. Agencies shall strive to increase the procurement of products that are environmentally preferable or that are made with recovered materials, and set annual goals to maximize the percentage of these products purchased from their total budgets.

[Sec. 603. Goals for Procuring Totally Chlorine-Free Paper Products. Each agency shall establish goals for procurement of totally chlorine-free paper products to be achieved by 1995. Separate goals shall be established for the different categories of paper products, including; printing and writing, tissue and towel, newsprint, paperboard, and packaging. Separate goals may be established for subcategories within these broad categories if the Agency so chooses. These goals shall be submitted to the Council on Environmental Progress within one year after the effective date of this order. Progress on attaining these goals

Extended Page 17.1

shall be reported by the agencies to their annual report specified in Sec. 604.]

Sec. 604. Annual Reporting Requirements. In accordance with RCRA section 6002 and this order, each Federal agency shall review the effectiveness of its affirmative procurement program and efforts to implement this order, and provide a report regarding its findings to the Office of Federal Procurement Policy, Office of Management and Budget. Such report, beginning with a report covering fiscal year 1993, shall be submitted annually for the next four years and transmitted to OFPP and to EPA by January 31 for the preceding fiscal year. Reports required by this section shall be made available to the public.

Sec. 605. Review of Implementation. The President's Council on Integrity and Efficiency (PCIE) will request that the Inspectors General periodically review agencies' affirmative procurement programs and reporting procedures to ensure their compliance with this Executive order.

PART 7 - APPLICABILITY AND OTHER REQUIREMENTS

Sec. 702. ^{Insert old Sec. 601 as attached below} Real Property Acquisition and Management. Within 90 days from the date of this order, and to the extent permitted by law and where economically feasible, Executive agencies shall ensure compliance with the provisions of this order in the acquisition and management of Federally owned and leased space. GSA and other Executive agencies shall also include environmental and recycling provisions in the acquisition of all leased space and in the construction of new Federal buildings. OK.

Sec. 703. Retention of Funds. Within 90 days after the effective date of this Executive order, the Administrator of the General Services Administration (GSA) in consultation with the Council on Environmental Progress shall develop a legislative proposal, that if enacted, will provide authority for executive agencies to retain proceeds from the sale of materials, recovered through recycling or waste prevention programs and will specify the eligibility requirements for the materials being recycled. Extended Page 18.1

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Sec. 701. Contractor Operated Facilities. Contracts that provide for contractor operation of a Government-owned or leased facility, awarded after the effective date of this Executive order, shall include provisions that obligate the contractor to comply with the requirements of this order. ^{In addition,} To the extent permitted by law and where economically feasible, existing contracts should be modified.

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Sec. 704. Model Facility Programs. Each Department and major procuring agency shall establish model facility demonstration programs that include comprehensive waste prevention and recycling programs and emphasize the procurement of recycled and environmentally preferable products and services using an EDI system.

Sec. 705. Recycling Programs. Each Executive agency that has not already done so shall initiate a program to promote cost effective waste prevention and recycling of reusable materials in all of its facilities. The recycling programs implemented pursuant to this section must be compatible with applicable state and local recycling requirements. Federal agencies shall also consider cooperative ventures with state and local governments to promote recycling and waste reduction in the community.

PART 8 - AWARENESS

Sec. 801. Agency Awards Program. A Government-wide award will be presented annually by the White House to the best, most innovative program implementing the objectives of this order to give greater visibility to these efforts so that they can be incorporated Government-wide.

Sec. 802. Internal Agency Awards Programs. Each agency shall develop an internal agency-wide awards program, as appropriate, to reward its most innovative environmental programs. Winners of agency-wide awards would be eligible for the White House award program.

PART 9 - REVOCATION, LIMITATION AND IMPLEMENTATION

Sec. 901. Executive Order No. 12780, dated October 31, 1991, is hereby revoked.

Sec. 902. This order is intended only to improve the internal management of the executive branch and is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any other person.

Sec. 903. The policies expressed in this order, including the requirements and elements for effective agency affirmative

procurement programs, shall be implemented and incorporated in the Federal Acquisition Regulation (FAR) within 180 days from the effective date of this order. The implementation language shall consist of providing specific direction and guidance on agency programs for preference, promotion, estimation, certification, reviewing and monitoring.

Sec. 904. This order shall be effective immediately.

THE WHITE HOUSE,

STREAMLINED PROCESS

Section 502 of the order

Background

Over the past few years, EPA has implemented the requirements of Section 6002 of RCRA through its procurement guideline development process. The guidelines have included the designation of procurement items and recommendations on how to procure the designated items, including minimum content standards. Currently, both the item designation and the procurement recommendations are proposed and finalized as one document in the Federal Register (FR) and subsequently codified in Title 40 of the Code of Federal Regulations (CFR). It is this codification that subjects guidelines to a lengthy formal review process. (Historically, it has taken two years to develop and issue guidelines through this process.) This has greatly limited our ability to issue guidelines in a timely and efficient manner.

EPA has two often-opposing objectives in developing procurement guidelines: to maximize the amount of recovered materials used to manufacture recycled products and to maximize the quantity of recycled products purchased by Federal agencies through affirmative procurement. Creating an equal balance between these two objectives is the only way we can impact the markets for recoverable materials. We must establish recycled content levels that would allow a reasonable number of sources to provide recycled products at a cost the government can afford.

Proposal

Due to the inordinate amount of time it currently takes to issue guidelines for items containing recovered materials, the draft Executive Order divides the designation and the recommendation portions of the guideline into two separate steps. The first step would utilize the formal rulemaking process. EPA would establish a Comprehensive Procurement Guideline (CPG) consisting of a list of items that are or can be made with recovered materials. The CPG, which would be developed through an interagency workgroup process, would be codified in the CFR. Public comment would be taken on the proposal and considered in preparing the final rule. EPA would update the CPG periodically, but no less often than annually.

The second step would involve the issuance of a Procurement Advisory Notice (PAN) by EPA. This notice would recommend recovered materials content levels for items that were designated in the CPG. EPA would issue the PANs at least annually and would announce their availability in the FR.

As with the CPG, the PAN would undergo public comment, but it would not be codified through the formal rulemaking process. Because PANs are only recommendations, using the formal rulemaking process would be unnecessarily burdensome. When

procuring products using a recommended content level, Federal agencies would determine the suitability of the content level in meeting their performance requirements. As with all procurements, the Competition in Contracting Act, which is implemented through the Federal Acquisition Regulations, would protect the rights of individual companies unable to meet the recycled content levels established by EPA.

PAN Development Process

EPA would form an interagency workgroup, which would include representatives from EPA, Federal agencies, and other interested or affected agencies, including OMB. The workgroup would meet to discuss various alternatives for developing the PAN. Upon reaching consensus, EPA would finalize the draft PAN and publish it for public comment in the Notice section of the FR. Following the public comment period, EPA would reconvene the interagency workgroup to consolidate comments received and to resolve outstanding issues. EPA would then prepare the final PAN for workgroup review. The final PAN would be published in the Notice section of the FR after addressing comments on the draft PAN.

Advantages

There are several advantages to streamlining the current guideline development process. The first advantage is the ability to designate more items. By creating a more efficient guideline development process, we will be able to designate dozens of different items simultaneously rather than specifically focusing on one or two items. The more items that we designate, the greater impact Federal procurement will have on developing markets for recyclable materials.

The second advantage is timeliness. Since minimum content standards or levels are recommendations, they do not necessitate the use of the lengthy formal rulemaking process, thereby saving time and money in research and development. Also, by issuing the draft and final recycled content recommendations in the Notice section of the FR, we will avoid the time-consuming process of amending the CFR. This will allow us to quickly adjust the PANs to reflect content levels actually procured by Federal agencies.

Finally, expediting the process will enable us to stay in the forefront of technological changes in recycling as recovered materials content increases in products.

Section 503 of the order**COSTS OF THE RECYCLED PAPER PROVISIONS OF THE EXECUTIVE ORDER**

Based on discussions with industry representatives, materials provided by individual paper companies, and our own analyses, we believe that, over the short term, it will be more expensive for the large, virgin integrated mills to make paper that contains 15 % postconsumer recovered materials than if they continue to use only virgin raw materials. Thus, if the paper companies pass these increased costs on to their customers, the government's cost of recycled commodity grade papers will be higher in the near term than comparable virgin papers.

We do not know for sure what the increased production costs will be over the short term and have not received definitive cost estimates from industry. We know that the incremental cost will increase as the amount of recycled content increases because it costs these mills more to buy deinked pulp from another manufacturer than to make virgin pulp at their own facility. Based on data received from industry, over the short term, we estimate that the likely production cost increase for large commodity grade mills to shift from total virgin production to a 15 % postconsumer recycled content will range from 9 to 12 %.

Over the long term, as companies make the decision to build their own deinking plants, their production costs will decrease because they can make deinked pulp at lower costs than they can pay to have someone make it for them. Thus, we expect that over the long term the cost of recycled commodity papers will approach the cost of virgin commodity papers. We do not have the data or information that would enable us to predict when that might occur, but it is reasonable to assume that it would take on the order of 5 years for industry to add significant recycling capacity at the large commodity mills.

We are very concerned about any action that would increase the government's costs of doing business. Thus, the Executive Order contains a provision that directs agencies to off-set any recycled paper cost increases by reducing their paper usage. This provides an incentive for agencies to implement waste prevention techniques such as double-sided copying and use of electronic communications methods. Thus, agencies will be able to purchase recycled paper without increasing their current budgets and are likely to save money over the long term.