

Specifications, Product Descriptions, and Standards

When implementing an agency's Affirmative Procurement Program, RCRA and Executive Order 12873 require contracts and specifications appearing in them be modified to focus on the use of recovered materials as much as possible. Through specification revision, agencies proactively direct their efforts toward meeting procurement goals and objectives for EPA-designated items. Agencies should:

Start with existing standards, definitions, and percentages whenever possible, particularly those recommended by EPA or established by Executive Order 12873.

Talk to the user, as well as vendors, to develop aggressive but realistic standards for recycled content.

Use EPA's recommended minimum content levels. These levels are set high enough to increase the use of recycled products but not so high they exceed the capabilities of existing technology or limit competition. By establishing minimum content standards in accordance with EPA's recommendations, agencies will satisfy the RCRA requirement to buy products containing the highest percentage of recovered materials practicable.

Focus on postconsumer content, amount of waste prevented, or performance-based measures as significant factors in making contract award decisions.

Amend bid solicitation documents and specifications to *remove* obstacles to using recovered material. For example, an "all or none" clause might preclude purchase of recycled products if some of the products solicited in the bid are not available with recycled content.

Emphasize performance specifications over aesthetic specifications. The important factor

is how a recycled product will perform for a particular end use.

Review and revise specifications annually as required by Executive Order, Section 501 and RCRA 6002.

For More Information

Copies of Federal specifications are available from GSA/FSSB (3FBP-W), Specification Section, Suite 8100, 470 L'Enfant Plaza SW., Washington, DC 20407, (202) 755-0325/0326.

Copies of military specifications are available from Defense Printing Service, Standardization Document Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, (215) 697-2179.

Copies of Government Paper Specification Standards published by the Joint Committee on Printing are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 under stock number 952-001-00000-1) \$21 for one year subscription. Phone orders to (202) 512-1800. (Note: list ID Code GPS when ordering.)

Determining Procurement Standards

Government procurement often involves products or services that must meet specific, reliable standards. Such standards are frequently available from private, voluntary standards bodies. Whenever feasible and consistent with the law, Federal agencies are to rely on voluntary standards and work with voluntary standards organizations, according to policy defined in OMB Circular A-119.

The American National Standards Institute (ANSI) and its member groups publish standards on a wide variety of products. The American Society for Testing and Materials (ASTM), which is one of ANSI's member groups, has standards for both testing methods and design. ASTM has developed performance

specification standards for various products, including paint, road and paving materials, paper, roofing, wood, packaging, rubber, soap, textiles, adhesives, plastics, leather, food service equipment, business imaging products, tires, and food. Several ASTM committees are developing definitions and specifications for products containing recovered materials. ASTM also has some specifications for use of recovered materials in specified products, such as fly ash in cement and concrete and glass cullet in fiberglass insulation.

The American Institute of Architects' *Environmental Resource Guide*, (202) 626-7300, proposes standards for energy efficiency, reduction of indoor air pollution and recycled content in building materials, and recommends design systems that allow for future recyclability. Also, Green Seal publishes standards and criteria for environmentally preferable products, (202) 331-7337.

The ISO 14000 Environmental Management Standards is another tool which may also contribute to greening the government. Several Executive agencies are already exploring the use of the ISO 14001 standard for Environmental Management Systems (EMS) in federal facilities. Use of this standard is consistent with the implementation of the Core Environmental Management Principles (CEMP) developed for use by federal facilities in conjunction with Executive Order 12856. Both would allow facilities to establish management systems which include environmental policies and objectives, the identification of current environmental requirements and significant aspects, documentation, opportunities for improvement, etc. The testing of the 14001 standard and implementation of the CEMP by federal facilities may offer valid demonstrations and measurable environmental performance resulting from an EMS. Other applicable standards under development in the 14000 series include: environmental labeling, environmental performance evaluation and life cycle assessment. EPA and DOE co-chair an

Inter-Agency Working Group on ISO 14000 under the umbrella of the Inter-Agency Committee on Standards Policy to coordinate issues and questions among the agencies on ISO 14000. For more information contact: Mary McKiel, Director of the EPA Voluntary Standards Network, 202-260-3584.

Designation of Items Containing Recovered Materials

In Executive Order 12873, Section 502, President Clinton directed EPA to streamline its process for designating additional items containing recovered material, in order to increase the number of products and update the recommended recycled content levels more easily.

In response, EPA issued the CPG on May 1, 1995 in the Federal Register, designating 19 new items containing recovered materials. It also consolidates the designations of the five existing items from the previous guidelines into 40 CFR 247 and describes the requirements for purchasing designated items through APPs. Additionally, EPA issued the *Recovered Materials Advisory Notice (RMAN)* recommending recycled content ranges and procurement practices for each product.

The RMAN includes recommended content levels for the 19 new products and includes revisions to the previous recommendations for retread tires, building insulation, and cement and concrete containing fly ash. When appropriate, content levels are specified as percentages of total recovered materials, percentages of postconsumer materials, or a combination. In some cases (e.g., remanufactured toner cartridges), setting a content level is inappropriate. EPA plans to update the RMAN periodically to ensure the content levels reflect changes in the marketplace. Through use of these guidelines, the Federal Government hopes to expand its use of products with recovered materials and to

help develop markets for them in other sectors of the economy.

The Federal Register notices in which the CPG and RMAN appear and an EPA Fact Sheet summarizing them are available in electronic format on the Internet System through EPA's Public Access Server at gopher.epa.gov. For the text of the Federal Register notices, choose: Rules, Regulations, and Legislation; then: Waste Programs/EPA Waste Information-GPO; finally, Year/Month/Date published. Fact Sheets and the Supporting Analyses documents for these actions are available under: EPA Offices and Regions/Office of Solid Waste and Emergency Response (OSWER)/Office of Solid Waste/Non-hazardous Waste/Procurement/General. For paper copies, contact the RCRA Hotline at (800) 424-9346, or in the Washington, DC, metropolitan area, (703) 412-9810.

Federal agency purchasing requirements for the 19 new items went into effect on May 1, 1996.

In November 1996, EPA proposed the addition of 13 recycled content products to the Comprehensive Procurement Guidelines. The proposed categories include shower and restroom dividers; latex paint; parking stops; delineators; flexible delineators; channelizers; snow fencing; garden and soaker hoses; lawn and garden edging; printer ribbons; inkjet cartridges; plastic envelopes; and pallets. The addition of these items will foster further growth within the recycling industry, as Federal agencies amend their affirmative procurement plans to include these items. The amendments to the Comprehensive Procurement Guidelines is expected to be finalized in the Fall 1997.

Proposed New Items

Shower and Restroom Dividers	Latex Paint	Parking stops	Delineators	Flexible Delineators	Channelizers	Lawn and Garden Edging
Garden & Soaker	Printer Ribbons	Inkjet Cartridges	Plastic Envelopes	Pallets	Snow Fencing	

RMAN Summary

Designated Item	Recovered Material Content Recommendations (%)
Binders	25-50 percent recovered material for plastic-covered office binders. Refer to RMAN, Part A, for chipboard, paperboard, or pressboard binders or components .
Building Insulation Products*	5-75 percent, depending on the type of insulation.
Carpet	25-100 percent polyester carpet fiber face, PET resin.
Cement and Concrete Containing Coal Fly Ash*	20-40 percent coal fly ash. RMAN recommends Federal agencies adhere to “voluntary consensus standards” in buying cement and concrete containing fly ash.
Cement and Concrete Containing Ground Granulated Blast Furnance (GGBF) Slag	25-50 percent GGBF slag; RMAN recommends Federal agencies adhere to “voluntary consensus standards” in buying this item.
Engine Coolants	Request or purchase reclaimed coolants in either of the two base chemical types (ethylene glycol or propylene glycol, not commingled).
Floor Tiles	90-100 percent postconsumer or recovered materials for heavy-duty/commercial-use rubber or plastic tiles.
Hydraulic Mulch	100 percent recovered paper or 100 percent recovered wood and/or paper for landscaping.
Laminated Paperboard	100 percent postconsumer recovered paper for insulating or structural applications.
Office Recycling Containers	Plastic at 20-100 percent postconsumer recovered materials, steel at 25-100 percent total recovered materials, and paper at content levels listed in Part A of the RMAN.
Office Waste Receptacles	Identical description to those above for office recycling containers.
Paper and Paper Products *	50 percent or more waste paper for most high-grade papers and 5-90 percent postconsumer content for other paper products including newspaper, tissue, packaging, and paperboard. EPA issued a draft revision in 1995. (See Recycled Paper Revisited below)
Patio Blocks	90-100 percent postconsumer rubber and/or rubber blends or 90-100 percent total recovered plastic and/or plastic blends for heavy-duty commercial type patio blocks.

RMAN Summary (Continued)

	Recovered Material Content Recommendations (%)
Plastic Desktop Accessories	25-80 percent polystyrene postconsumer recovered materials.
Plastic Trash Bags	10-100 percent postconsumer recovered material plastic content.
Playground Surfaces	90-100 percent postconsumer rubber or plastic recovered materials based on dry weight of the raw materials.
Re-refined Lubricating Oil *	25 percent or more re-refined oil base stock for lubricating oil, hydraulic fluids, and gear oils.
Retread Tires *	Federal agencies must purchase retread tires or tire retreading services to the maximum extent feasible.
Running Tracks	Subject to the same content as playground surfaces above.
Structural Fiberboard	SO-100 percent total recovered material.
Toner Cartridges	Remanufacturing agencies' expended cartridges and purchasing remanufactured or new toner cartridges made with recovered materials.
Traffic Barricades	100 percent total recovered material, consisting of SO-100 percent postconsumer HDPE, LDPE, PET, or steel. 100 percent total recovered material for fiber-glass traffic barricades.
Traffic Cones	50-100 percent total recovered PVC, LDPE, or crumb rubber material.
Yard Trimming Compost	Purchased or produced yard trimmings, leaves, and/or grass clippings using an on-site composting system when feasible.

(*designates original 5 items)

Who Must Buy EPA-Designated Products?⁶⁰

Agencies are required to purchase EPA-designated products if their answers to both of the following questions are yes:

1. Is the agency a procuring agency?

RCRA §1004(17) defines a procuring agency as “any Federal agency, or any State agency or agency of a political subdivision of a State which is using appropriated Federal funds for such procurement, **or any person contracting with any such agency with respect to work performed under such contract.**”

Federal agencies, each considered as a whole, are always procuring agencies. For example, the entire Department of *Defense is a procuring agency* for RCRA applicability purposes. Separate Services, branches, or facilities do not constitute procuring agencies.

A State or local agency is a procuring agency when it uses appropriated Federal funds for a procurement of an EPA-designated item. The Federal funds can include grants, loans, cooperative agreements, *or other instruments funded by appropriated Federal funds.*

Contractors are designated as procuring agencies when they are contracting with Federal, state, or local agencies using Federal funds for a procurement. State and local governments and their contractors, when funded by Federally appropriated dollars, are subject to procurement preference for products containing recycled materials (OMB Circular A-102, revised October 7, 1994). Changes to the Federal Acquisition Regulation (FAR) by Case #92-054 in 1995 also require contractors’ to submit paper documents relating to acquisition to be printed/copied double sided on recycled paper. (For more information, see Appendix F)

Only Government agencies and their contractors are or can become procuring agencies. Private party recipients of Federal loans, grants, or funds under cooperative agreements are not procuring agencies.

2. Is the agency purchasing \$10,000 or more of a designated item or did it purchase at least \$10,000 of a designated item in the preceding fiscal year?

RCRA 5 6002(a) stipulates “a procuring agency shall comply with the requirements set forth in this section and any regulations issued under this section, with respect to any purchase or acquisition of a procurement item where the purchase price of the item exceeds \$10,000 or where the quantity of such items, or of functionally equivalent items purchased or acquired in the course of the preceding fiscal year, was \$10,000 or more.”

The \$10,000 threshold applies to each procuring agency as a whole (e.g., if the Department of Defense procures more than \$10,000 worth of paper or any other Guideline Item, then all of the Department subunits/services, such as the Navy, must comply with the Order for acquisitions of those items, even if the subunit purchases don’t exceed the threshold).

If a procuring agency has determined it purchased \$10,000 worth of a designated item or functionally equivalent items during the preceding fiscal year, it is subject to RCRA § 6002. If so, the requirements apply to all purchases of these items occurring in the current fiscal year.

If the procuring agency did not procure \$10,000 worth of a designated item in the preceding fiscal year, it is not subject to RCRA § 6002, unless, in the current fiscal year, it purchases \$10,000 or more of a designated item in a single procurement action. If so, the requirements apply to the single \$10,000

⁶⁰These questions are treated in greater detail along with other relevant questions in Appendix H.

procurement and to all subsequent purchases of the designated item made during the current fiscal year.

Guidance for Environmentally Preferable Products

Section 503 of Executive Order 12873 requires EPA to issue guidance recommending principles that Executive agencies should use in making determinations for the preference and purchase of environmentally preferable products.

EPA has developed draft general guidance representing the first of a two-part approach to implementing Executive Order 12873, Section 503 requirements. *The Guidance on Acquisition of Environmentally Preferable Products and Services, Solicitation of Comments and Meetings*; *Federal Register* September 29, 1995 includes a set of guiding principles and establishes a framework for implementation by Executive agencies through pilot and demonstration projects. The document also includes appendices supplementing and expanding on the concepts and ideas presented in the general guidance. The appendices in the draft guidance are a mix of tools agencies can use as they begin the process of identifying and purchasing environmentally preferable products and services.

The Environmentally Preferable draft guidance, however, may not answer many of the questions arising during acquisition of a particular product category or service. Thus, in the second part of the implementation approach, EPA, in conjunction with Executive agencies, will target specific product categories requiring more detailed investigation.

In this Environmentally Preferable Products document, issuing product category specific guidance will be related to current or proposed pilot acquisitions to be selected by Executive agencies. These voluntary pilot acquisitions will be the "laboratories" for applying the principles and further developing the tools con-

tained in the general guidance. The results of the pilots will provide "lessons learned" for future acquisitions.

The two-part approach is designed to help Executive agencies meet their obligations under Executive Order 12873 to identify and purchase environmentally preferable products and services. This approach draws on the extensive procurement experience of the Executive agencies and on the environmental expertise of EPA and others both within the Government and outside. This partnership between the acquisition and environmental experts, over the long run, will develop an infrastructure

Closing the Circle Award Winner

In 1993, the United States Coast Guard (USCG) Support Center in Governors Island, New York, instituted an aggressive procurement controls system that reduced operating costs and hazardous waste. Their program is Source Reduction Through Green Product Substitutions. An integrated team consisting of procurement staff, pollution prevention coordinators, and the workforce was assembled to facilitate source reduction. The team accomplished this through product substitution, effective inventory management, and extensive education on earth friendly products that are recyclable, nontoxic, and biodegradable. Team members identified alternative products in the GSA Environmental Products Guide, the Defense General Supply Center's Environmentally Preferred Products Guide*, and through actual product demonstrations. The team's efforts have culminated in successful substitution of over 100 recycled or earth friendly products and effectively reduced hazardous waste generation by 54%. The program produced taxpayer savings of over \$83,000 in 1994.

*(Now titled Environmental Products Guide)



Environmentally Preferable Cleaning Products

Under the proposed Guidance on Acquisition of Environmentally Preferable Products and Services, the first product category pilot project focused on cleaning products. To approach this task, a partnership between GSA and EPA was formed, encompassing the needs of the users (GSA's Public Buildings Service), the procurement community (GSA's Federal Supply Service), and the environmental expertise of EPA. During the pilot project, information was gathered through interviews with industry leaders, public interest groups, and commercial janitorial companies to gain an understanding of the cleaning industry and cleaning products. As a result of a GSA/EPA pilot study in an East Philadelphia Federal Building, a product-specific method for risk management analysis was constructed. The Cleaning Products Pilot Project Case Study (EPA 742-R-97-002) documents the history of and the lessons learned from this pilot project.

This comparative assessment of 19 products and their attributes was NOT intended as a means of directing purchasing decisions, nor does it definitively rank the preferability of the 19 products. It does examine the 19 products in terms of certain attributes, including: irritation potential, health risk, ultimate biodegradation time, bioconcentration factor (BCF), percent volatile organic compounds (VOC's), amount of packaging, presence of cosmetic additives (perfumes or dyes), and potential for exposure to the concentrated form of the cleaning solution.

The taskgroup realized that ranking products based on environmental preferability was not advisable given the number of variables affecting that determination and the lack of absolutes. The full matrix of considerations is enormous, There are a total of 5 stages in a product's life cycle, and within each stage, there are a host of attributes to be considered from the perspective of human health hazard and risk, environmental impacts, and others. For the pilot project, the RMI workgroup chose to limit their study to general purpose cleaners at the "use" stage and to some extent, the "disposal" stage of the life cycle. Federal consumers may select products based on the information available as well as the local environmental issues and concerns.

Drawing from the work done in the RMI assessment, selected product attributes were identified as initial indicators for Federal consumers purchasing cleaning products. Using these selected product attributes, a revolutionary approach was developed by the GSA/EPA Workgroup and the GSA Federal Supply Service working with product vendors already on the FSS Biodegradable Cleaner/Degreaser Schedule. Vendors will be voluntarily providing information about their products and selected product attributes in an information matrix to be published early in 1996. In addition to the required information on biodegradability and acute toxicity, vendors will be voluntarily supplying information on skin irritation, food chain exposure, air pollution potential, reduced/recyclable packaging, fragrances and dyes, and product features to minimize exposure to concentrates.

This handful of product attributes is in no way meant to be the definitive answer to "environmentally preferable" cleaning products. Rather, this is a starting point and can be expanded in the future to include additional environmental attributes and considerations.

For copies of EPA's Guidance on Acquisition of Environmentally Preferable Products and Services (60 FR 50722) and the Cleaning Products Pilot Project Case Study(EPA742-R-97-002) contact:

EPA/PPIC
401 M St., SW (7409)
Washington, DC 20460
Phone: (202) 260-1023
Fax: (202) 260-4659

and knowledge base to support this important initiative.

For information on Environmentally Preferable Products and Services, contact EPA's Office of Pollution Prevention at (202) 260-4172.

For a copy of the proposed guidance, call the Pollution Prevention Information Clearinghouse (202) 260-1023.

Minimum Content Standards for Printing and Writing Paper

Executive Order 12873, Set 504 requires all Federal purchases of specified uncoated printing and writing paper to contain a minimum of 20 percent postconsumer material as of December 31, 1994. This percentage increases to 30 percent beginning December 31, 1998. (Note: **These content levels are in effect whether or not EPA revises its recommendations.**)

On May 29,1996, EPA published the *Paper Products RMAN* in the *Federal Register* (61 FR 26992). The RMAN updates EPA's 1988 *Procurement Guideline for Paper and Paper Products Containing Recovered Materials* by recommending new recovered materials content levels for paper purchased by Federal agencies, their grantees, and contractors.

The draft *Paper Products RMAN* incorporates the recycled content requirements for printing and writing papers established in Section 504 of the Executive Order. EPA is also recommending

new levels for tissue products, newsprint, paperboard, and packaging and is adding several new paper items to the list. The RMAN provides recommendations for more than 50 different paper items.

In addition to recommending content levels, the RMAN provides information on several issues which have surfaced since the 1988 paper procurement guideline was implemented. For example, a detailed method is provided for calculating recycled content. In the RMAN, EPA also suggests agencies consider how the papers they purchase affect the type and amount of paper waste they generate.

For information about existing and draft standards for the Paper Products RMAN contact the EPA RCRA Hotline (800) 424-9346.

Revision of Brightness Specifications and Standards

Brightness, as a characteristic in paper specifications has often been seen as a barrier to supplying recycled content paper to the Government. To comply with the brightness requirements of the Executive Order for printing paper, the JCP has reviewed and issued a revised government *Paper Specification Standards Book* (No. 10). The GPO has also completed its review of all "non-JCP printing paper specifications. Additional GPO/JCP paper product specifications are being reviewed and revised as an ongoing project. There are four sources for paper and paper product specifications and standards for Government use: (1) JCP printing paper specification; (2) GSA paper and paper product specifications; (3) GPO paper and paper product specifications; (4) Military specifications. By statute, the JCP is responsible for setting specifications for printing papers used by Federal agencies. GSA is responsible for preparing Federal specifications for non-printing papers and CIDs (Commercial Item Descriptions) for the Federal

Government.” GPO issues specialized printing paper and paper product specifications for its own procurement program. Military specifications are used in military procurements.

Although the Executive Order does not prohibit the use of chlorine as a brightening agent, GSA uses contract/solicitation language to allow agencies to specify chlorine-free brightening in their paper purchases. In GSA solicitations, the following language appears: “...to obtain an acceptable brightness a chemical bleaching process may be used. When specified in the ordering data, the bleaching process shall not include the use of chlorine, chlorine dioxide, hypochlorite, or other chlorine containing compound.”

Procurement of Re-Refined Lubricating Oil and Retread Tires

Used and discarded oil and tires present a significant environmental challenge to American society. As a result of the passage of RCRA, EPA undertook extensive research on the products available and the technologies in those industries. Ultimately, EPA designated re-refined oil and retread tires for Federal procurement in 1988. Unfortunately, acquisition of these recycled content products has been moving at a glacial pace. According to data collected by the Office of Management and Budget for Fiscal Year 1995, Federal agency use of retread tires rose from slightly more than 3 % in FY 1995 to approximately 10 percent of Federal tire purchases in FY 1995. During this same time, Federal re-refined oil procurement rose from a low of one percent to slightly less than 6 percent of all lubricating oil purchases. The Federal Government maintains over 300,000 vehicles (plus an additional 200,000 Postal Service vehicles), and logically, would be a good customer for re-refined oil and retread tires. As mentioned above, lubricating oil and retread tires

were two of the first five “Guideline” Items listed by EFA under RCRA “Buy-Recycled” requirements. That meant Federal agencies purchasing lubricating oil and tires in excess of \$10,000 a year were obligated to procure retread tires and lubricating oils containing a minimum of 25% re-refined base stock.

Re-refined Oil

Re-refined lubricating oil costs about the same as virgin motor oil, and is a much better deal for the environment. Each year cars and trucks in America produce over 1.3 billion gallons of used motor oil. Eighty million gallons of this used oil is disposed of improperly, contaminating our land and our water supplies. Just one gallon of used oil-the typical amount drained from one car’s crankcase-can contaminate a million gallons of fresh water. This is also a significant waste of a valuable, non-renewable resource. It takes about a barrel (42 gallons) of crude oil to yield 2.5 quarts of base stock for lubricants, when re-refining one gallon of used motor oil recovers the same amount of base stock, 2.5 quarts. The cost to society of not being careful stewards of this resource is significant, especially in terms of our reliance on foreign oil imports and the environmental damage caused by the improper disposal of used oil.

The good news is, oil never wears out! It just gets dirty and can be readily “recycled” through technology similar to that used to refine crude oil.

In Executive Order 12873, President Clinton directed Federal agencies to lead the way in procuring re-refined oil products. The Office of the Federal Environmental Executive was given the task of determining how to ensure agency compliance. Initially, agencies were slow to accept re-refined motor oils and lubricants for their vehicles. A concoction of myths had circulated among procuring officials and end-users about performance, availability, and the

“Historically, GSA has not had any significant problems with brightness when contracting for recycled content paper. As a result, GSA has not had to make any changes to the paper specifications over which it has cognizance.”

At a meeting with a Wal-Mart Stores representative, it became clear Federal customers using GSA vehicles could find re-refined oil at any Wal-Mart Store because they carry the America's Choice™ brand, 100% re-refined lubricating oil. In addition, over 800 Wal-Mart stores have "quick lube" facilities providing re-refined oil on request. We anticipate this will be the first in a series of quick-lube franchises willing to provide re-refined lubricating oil to Federal customers

prospects of vehicle engine warranties being voided if re-refined oil was used. The Office of the Federal Environmental Executive was determined to investigate, and if appropriate, "debunk" each of these myths using the facts about re-refined oil. As it turns out, the warranty point was not a myth after all and needed attention.

Most of the civilian Federal fleet of vehicles is managed by the General Services Administration (GSA). As a result, GSA guidelines are generally followed by other Federal agencies. Until February 1995, GSA's written manual prohibited the use of re-refined oil because the oil's Performance was not certified by the American Petroleum Institute (API), and its use would void manufacturers' warranties as issued by the Big Three domestic automakers. However, at least two re-refined oil manufacturers sell API-certified products. With that knowledge, the Federal Environmental Executive convened an "Oil Summit" in December, 1994, with representatives of GSA fleet management, other Federal agencies, oil manufacturers, and automakers. At that meeting, the Big Three

U.S. automakers made clear they would allow re-refined oil use in their warranted vehicles as long as it was properly certified by the API. The API Starburst symbol would be used as the official certification indicator. The warranty issue was thereby resolved. Representatives of the re-refined oil industry acknowledged they had distribution problems but promised to issue a buying guide to tell customers where re-refined oil was available. The guide has been published, and copies are available from the Office of the Federal Environmental Executive. Finally, on February 27, 1995, GSA announced that re-refined oil, bearing the Starburst symbol, should be used in Federal vehicles (see Appendix E for warranty statements and GSA policy letter).

Now that these hurdles have been cleared, Federal agencies must concentrate on increasing Federal demand for re-refined oil. A key player in the marketing strategy is the DLA, because it's a major lubricating oil supplier to Federal organizations.

The Office of the Federal Environmental Executive's partnership with DLA has resulted in Defense Supply Center Richmond awarding contracts for re-refined oil. National Stock Numbers (NSNs) have been assigned for 10W30 (in accordance with Commercial Item Description A-A-52039) and Mil Spec 15W40 (in accordance with MIL-L-2104) as follows:

NSN	Viscosity	unit of Issue
9150-01-413-6897	10W30	Box of 12 quart bottles
9150-01-413-6892	10W30	5 Gallon container
9150-01-413-6990	10W30	55 Gallon Drum
9150-01-421-1427	15w40	one Quart
9150-01-421-1424	15w40	5 Gallon Can
9150-01-421-1432	15w40	Gallon Drum

The IOW30 meets the American Petroleum Institute's "SH" performance classification and the International Lubricant Standardization and Approval Committee "GF-1" standard. The Mil Spec 15W40 meets all the requirements of MIL-L-2104 and has been qualified by the Army's Mobility Technology Center-Belvoir, Fort Belvoir, VA for listing in the current qualified products list. All oils under this specification meet the American Petroleum Institute's CD and CD-II performance levels.

In addition to the above products, DSCR is currently planning for a Nationwide Closed-Loop Re-refined Oil Program. Through this program, re-refined oil (packaged or bulk) will be provided to the installations and used oil will be removed. This program is expected to be available by the end of 1997. To be kept advised on this and other re-refined oil news, request to be on the DSCR re-refined oil mailing list by calling Ms. Robin Champ at (804) 279-4908, or e-mail her at rchamp@dscr.dla.mil.

The Office of the Federal Environmental Executive's preliminary success in helping to remove the barriers to Government re-refined oil purchases has been instructive. One lesson is that Government regulations and Executive orders are not necessarily self-implementing. But with time, effort, and attention to specific concerns, acceptance of recycled products can be won.

Retread Tires

Approximately 240 million scrap tires are generated in America every year, about one for every person in America. Some of these tires are land-filled, not because there aren't better uses for them, but because we don't have markets for this potential resource. When discarded tires form above ground tire piles, they are not just an eyesore, but a potential breeding ground for rats and mosquitoes and they become major sources of pollution when they catch on fire.

Many people are surprised to learn the tires on U.S. commercial aircraft, the tires on the fire

trucks and emergency vehicles protecting us, and nearly all "over-the-highway" truck tires are retreads - and have been for years. With a history similar to that for used oil, the demand for the product has been problematic. Could anyone really expect an alleged inferior, unsafe product to sell? To make matters worse, the supply/distribution network was not good. However, GSA maintains a tire QPL and has a Quality Assurance Facility Inspection Program (QAFIP) to ensure high quality facilities are available to retread our tires. Despite this, there are a number of reasons why the record on retread tire purchases by the Federal Government has been only marginally better than the performance on used oil. Mythology once again plays a central role, in particular, the myth that retread tires are inferior in quality and unsafe.

The environmental advantages to using retreads are enormous. Twenty-two gallons of oil are required to manufacture a new truck tire, whereas only 7 gallons are needed to retread that same tire. That savings of 15 gallons of oil per truck tire would translate to a savings of 258 million gallons of oil to be saved every year. When considering all the various types, retreading truck and other tires actually conserves more than 400 million gallons of oil annually. New tires consume 14,700 BTU's per pound of tire produced, whereas retreads only need 2,200 BTU's per pound. Capturing such savings could be critically important in achieving and maintaining America's oil independence.

There is also a significant cost advantage to using retreads. With comparable quality, retreads cost between one third and one half that of new tires. This translates to almost \$2 billion in savings each year to tire consumers.

With this economic incentive, truckers have made retreads their choice for more than 50 years. In fact, in 1994, truckers purchased 16 million retreads compared to 11 million new tires. The heavy truck tires are actually made to be retreaded many times and only an estimated

30% of a new tire investment is realized when the original tread has been worn from its casing. Although lighter tires represent a lesser savings when retreaded compared to the heavy truck tires, still a substantial savings can be realized. Regardless, the cost per mile will be less with a retread than with a comparable new tire.

Although the economic case to be made for retreading passenger tires is not as good as that for the heavier tires, when properly retreaded, these lighter tires can gain an additional 35,000 miles of use. The Federal Qualified Products List (QPL) and QAFIP list retread passenger tires meeting certain minimal Federal quality standards.

One of the most persistent myths about retread tires is they are inferior in quality and unsafe to use. People often point to the pieces of tire along our highways as evidence for the claim that retread caps chronically separate from their old casings, assuming the pieces beside our highways are from those sources. While there may have been some basis for that allegation twenty-five years ago, today's retreads are no more likely to separate than non-retreaded tires. The reality is that rubber on the road is caused by tire abuse - - whether the tire is new or a retread. If a tire is abused (overloaded, under inflated, or mismatched to the other tire on a set of dual wheels on a truck), or if the tire isn't taken out of service when it begins to have a problem, the tire is going to come apart and leave rubber debris all over the highway. The fact is, pieces of new tires are as common along the roadside as pieces of retreads.

"The Tire Retread Information Bureau would be happy to provide you with information and videos that will help dispel retread myths (408) 372.1917.

Suppose you are driving to work in your car and you realize one of your tires is going flat. Without exception, you will stop and change the tire. You may not like it especially if it is raining, snowing, you are in a hurry, etc., but there is no way you will continue driving with a flat tire.

Now suppose you are driving an eighteen wheel tractor trailer and you hear or feel a tire developing symptoms of trouble. Unless its a front (steering) tire and you have no choice but to stop, you should be able to continue driving until you get to a truck stop where the tire can be changed more easily. After all, you have seventeen other tires to keep the truck going.

Now suppose the damaged tire is actually a brand new tire that had been installed just last week and had never been near a retread factory. It was either defective or it happened to pick up a nail which caused it to go flat. As you keep driving your eighteen wheeler to the truck stop, the damaged tire will continue to lose air and overheat, If you drive long enough the tire will finally disintegrate and blow rubber pieces all over the highway.

Now remember, we said the tire that came apart was a new tire that had never been near a retread factory. But you can be certain the person in the car behind your truck will say, "Look at that! Another retread! There ought to be a law against those things!"

So you see, the retread industry takes the blame for much of the rubber on the road although a large percentage of the "ugly alligators" comes from new tires which have never been retreaded."

Harvey Brodsky
Tire Retread Information Bureau²

Retreads are routinely and safely used by school buses, fire, and other emergency vehicles, commercial aircraft, and by millions of passenger cars and trucks. The U. S. Postal Service routinely uses retreads knowing they will perform the same as new tires, and at a far lower cost. Retreads can do the same for vehicle fleets across the Federal Government. Contact the National Recycling Coalition, Inc. (703) 683-9027 for a Retread Tire Information Sheet and EPA for their Tire Fact Sheet (800) 424-9346 or (703) 412-9810.

Environmental Innovation

Camp Grayling, (MI Army National Guard) Area Training Sites - MATES employees have made remarkable strides in their efforts to curb pollution. Through recycling, they reduced disposal of antifreeze by 70% and reduced disposal of sulfuric acid by 99.6%. They have introduced a citrus-based solvent with which they expect to decrease solvent disposal by more than 3,000 pounds per year. The entire team operates with an environmental awareness ethic - a philosophy of Reduce, Reuse, Recycle.

Affirmative Procurement

McChord's Air Force Base "Buy Recycled" campaign has put its full purchasing power behind the effort to improve markets for recyclables, purchasing more than \$1.2M in products with recovered material and 9,000 recycling containers produced from recycled plastic. MAFB also went from an 8% buy recycled rate in early 1995 to above 85% by year's end. McChord's Affirmative Procurement program is so sound it is already tackling the challenges of the \$120M C-17 Beddown Military Construction Project. And its Affirmative Procurement team has fully incorporated Total Quality Environmental Management (TQEM) principles based on the Malcolm Baldrige Award criteria.

Since the U.S. Postal Service implemented an **Affirmative Procurement Program** in 1992, the results have exceeded even their own expectations. In FY 94, their purchases of paper and paper products totaled more than \$162M. Paper and paper product purchases containing recycled content totaled nearly \$64M or 39% of these purchases. In FY 95, their purchases of paper and paper products totaled more than \$130M. Paper and paper product purchases containing recycled content totaled more than \$63M or more than 48%.

Case Study:

Plymouth Rock Transportation Corporation (PRTC)

PRTC studied four brands of new tires against one retread manufacturer. The retreads placed on top in cost/mile comparisons and runner up in miles/32nd of treadwear. When comparing tire failure and tire wear, there was no correlation. Abused tires, regardless of origin, failed at the same rate. Since 1990, PRTC has reduced its fleet tire costs 56% using retreads and by maintaining tires properly.

Case Study:

Huntington Beach, California, USPS

The Postal Service in Huntington Beach switched to retreads on their two-ton delivery trucks as well as their tractor trailers. The savings estimated for the latter type was 60% compared to 45% for the former. Quality was not sacrificed as these savings were realized since there were no road failures among those vehicles using retreads!

Case Study:

General Services Administration and Environmental Protection Agency

A Closing the Circle facility award for Environmental Innovation was presented to the General Services Administration and Environmental Protection Agency, New York, NY, for their project titled, "Green Clean."

Responding to concerns about the role of cleaning agents on indoor air quality, GSA and EPA jointly devised a "green" house-keeping program. This pilot was initiated at the Federal building in New York City that houses the EPA Regional Headquarters. The pilot program successfully reduced indoor air pollution, tenant reactions to volatile chemical cleaning solvents, solid waste, VOC's to the atmosphere and maintained cleaning performance levels. In addition, the cleaning solvents used were formulated with renewable resources or feed stocks. This program is now being implemented throughout GSA's Region 2.

Case Study:

Ohio Postal Facilities

Ohio Postal Facilities Won Closing the Circle Group Award in the category of "Sowing the Seeds for Change" for "Recycling Used Fluorescent Lamps at Ohio Postal Facilities"

More than one thousand U.S. Postal facilities in Ohio have implemented a Standard Operating Procedure to recycle all fluorescent lamps instead of land filling. In early 1995, Columbus Postal District, in Ohio, was faced with the problem of properly disposing of used or unwanted fluorescent and high intensity discharge (HID) lamps. Knowing that fluorescent and HID lamps contain hazardous metal halides and mercury, the Postal Service facilities believed that land filling these lamps was not the best environmental practice. The District developed a plan to collect, store and ship all spent fluorescent and HID lamps for recycling. The new process was then shared to cover the entire 1,028 Postal facilities in the state of Ohio. Since the inception of the plan in 1995, it is estimated that more than 46,000 spent lamps have been recycled.



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 Federal Environmental Executive within 180 days after the effective date of this order. Progress on attaining these goals shall be reported by the agencies to the Federal Environmental Executive for the annual report specified in section 301 of this order.

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 number of recycled products purchased, relative to non-recycled alternatives.

Waste prevention, also known as source reduction and/or pollution prevention, is any practice reducing the quantity and/or toxicity of materials or products (including packaging) before they become municipal solid waste. Waste prevention can be implemented at any stage of waste generation: input, use, or treatment. It may involve any of the following techniques: process modification, reuse of products or materials, waste stream segregation, inventory control, good housekeeping, or best management practices, employee training, recycling, and substitution. Examples of waste prevention include using electronic mail, and CD-ROM archival systems, replacing petroleum-based

inks with vegetable-based inks, and reusing equipment. Further waste prevention can be achieved through reusable or recyclable packaging or by using that having recycled content.

Executive Order 12873 directs Federal agencies to prevent waste. Specifically, Section 601 of the Executive Order requires agencies to establish goals for solid waste prevention. Progress on attaining these goals must be reported to the Federal Environmental Executive annually. Section 504(c)(2) encourages Federal agencies to implement waste prevention techniques (such as electronic transfer and double-sided copying) so total annual expenditures for recycled printing and writing paper do not exceed current annual budgets for paper products, as measured by average annual expenditures. Further, Section 402(d)(3) of the Executive Order requires contracts, grants, and cooperative agreements to include provisions requiring documents to be printed double-sided. In addition, the Executive Order requires the Executive Branch to implement an electronic acquisition system to reduce waste by eliminating unnecessary paper transactions in the acquisition process.

The most effective way to reduce an **agency's** waste is to generate less in the first place. Producing less waste makes good economic sense, but there are also many environmental benefits from waste prevention. Avoiding the generation of waste slows the depletion of natural resources, conserves valuable landfill space, and reduces the pollution associated with the manufacture of certain products. Moreover, the term waste is instructive in that it implies the non-productive use of resources.

Upper Level Commitment

It is important to get senior management to support any Waste Prevention Program. Once this has been established and communicated, it is easier to motivate and empower the entire organization to become involved and focused on the same goal. Waste prevention programs are more successful when **everyone** is involved: management, employees, customers, and vendors.

Waste Prevention Teams

Establishing a waste prevention team is the next step toward setting meaningful goals. This team is a group of employees responsible for goal setting, planning, designing, implementing, and evaluating the program. A team approach allows these tasks to be distributed among employees representing various functions across the organization. A waste prevention team might include environmental managers, building supervisors, technical or operational staff, administrative staff, maintenance staff, purchasing staff, training staff, public affairs staff, and contractors.

Planning:

Assessing The Waste Stream

Before developing specific waste prevention initiatives, it is important to know what waste is to be reduced, how much reduction is desired and achievable, and how the results will be measured. Although many effective waste prevention measures can be adopted without first performing an opportunity assessment, knowledge of the composition of the waste stream is very helpful in setting goals. The waste assessment serves two basic purposes: to establish baseline data by collecting background and current information on an agency's purchasing, use, waste generation, and management practices. Also, it serves to assist in setting goals by identifying potential waste reduction options for

further evaluation. A waste assessment can involve examining facility records, conducting a facility walk through, or simply sorting wastes into categories. The information generated in a waste assessment can provide a much greater understanding of the types and amounts of waste generated. These data can be invaluable in the design and implementation of a waste prevention program. Materials can be targeted for waste prevention because they constitute a major portion of the waste stream, are easy to reduce, or are major contributors to pollution if being disposed. Statistical tools are available to help in making decisions about which component of the waste stream should be targeted first.

Waste Prevention Techniques

The process of conducting a waste assessment will help managers identify opportunities to reduce waste generation. While programs will likely be tailored to each agency's unique needs and characteristics, a great deal can be learned from the experiences of other agencies. The examples in this section can provide a springboard for such programs.

Use minimal or reusable packaging

Target sources responsible for the greatest amount of waste

Encourage suppliers to minimize packaging used to protect their products

Seek new suppliers offering reduced or minimized packaging or in a concentrated form

Choose products with reusable packaging or those offered in bulk quantities

Work with suppliers to *arrange* for the return of shipping materials

Examine current agency packaging policy to see if fewer layers can be used or if returnable or reusable containers could be substituted

Use and reuse newspaper and shredded paper for packaging

Closing the Circle Award Winner

The Army National Guard, Arlington, VA tailored pollution prevention programs and environmental goals to individual facilities, despite the fact that most facilities do not generate large quantities of hazardous waste and fall below the minimum threshold for mandatory prevention actions. They have targeted the use of less hazardous solvents, hot water pressure washers, and reutilization of solvents recovered through distillation. The Guard also has created recycling programs to target antifreeze, batteries, and shop towels. Together, these measures have annually reduced waste by about 64,000 pounds and saved tax payers \$8,400.

Reuse polystyrene peanuts or a biodegradable alternative or use air-filled bags instead

Reuse packaging materials for outgoing packages

Use and maintain high quality, durable, and repairable equipment and supplies

When equipment wears out, consider disposal or recycling alternatives

Repaired equipment may be donated to another needy organization

Recycle salvagable or spare parts from old equipment

Consider renting instead of buying

Using durable, reusable products rather than single-use materials is one of the most effective waste prevention strategies. For example, reuse common items such as file folders and interoffice envelopes. Use obsolete forms and scrap paper for drafts and to make scratch pads. If no sensitive information is involved, paper can be

donated as drawing paper to child care or similar facilities. Use rechargeable batteries where practical.

When reuse of materials is not an option, agencies should consider reducing the use of hazardous components and thereby accomplish waste reduction. Agencies can reduce waste toxicity by substituting products or materials with nonhazardous or less hazardous alternatives. For example, many products used by graphics and maintenance departments, such as cleaning solvents, inks, paints, and glues, are available with fewer or no hazardous components.

Use supplies and materials more efficiently. There are many strategies agencies can adopt to reduce waste and conserve materials. Purchasing and inventory practices that generate waste unnecessarily can be eliminated. Consider establishing a computerized inventory control system. Various locations in the same organization can share materials and buy bulk quantities reducing unit costs and using less packaging.

Green Rooms

At larger office facilities, one way to encourage reusing products and supplies is to establish a "Green Room" or a smaller storage area, such as a locker, at a central location, where no longer needed office supplies can be accumulated. As employees turn in reusable office supplies and small office items, other employees needing such products can take them out for reuse. The GSA Headquarters Building has established just such a program. In addition to office supplies, their Green Room offers recycling containers and lists of excess carpet and furniture. To maintain the GSA Green Room, a "Stay-in-School" (High School student intern program) staffs the reception desk twice a week.

Reusing Government Owned Property

The Federal Property Act and the Federal Property Management Regulations (FPMR) require Executive agencies to use excess person-

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Preventing Paper Waste

Paper is one of the largest components of most agencies' solid waste stream. There are many ways agencies might be able to use paper more efficiently. Some ideas include:

- Two-sided printing and copying
- Sending messages via electronic or computer mail instead of on paper
- Circulating (rather than copying) memos, documents, periodicals, and reports or posting memos in a central location
- Saving documents on hard drives or floppy disks instead of making paper copies
- Making notepads from scrap paper
- Establishing and using central files to reduce the number of hard copies each agency retains
- Eliminating blank spaces and pages and reduce the font size in documents to save space
- Keeping mailing lists current to avoid duplication
- Removing names from mailing lists for materials no longer needed, or sharing the materials with others
- Proofing documents on the computer screen before printing
- Using lighter weight papers
- Passing this Guide along to someone else who could use it.

ed for information on school districts with the largest number of students from low income families. Federal agency property control officers should be contacted for further information.

Setting Meaningful Goals

After getting the entire organization involved and focused on the same goal and establishing a waste prevention team, the next step is to set meaningful goals. In setting goals and prioritizing various possible actions, calculate return on the agency's investment as a valuable barometer to review those actions. Numerical waste prevention goals can be misleading if terms are not specifically defined. Clearly defined goals include a percent reduction, a baseline year, a target year for achievement, a measurement method, and specified waste streams. These goals need to complement recycling, energy efficiency, and affirmative procurement goals.

Recycling

Recycling, in some respects, is easier to implement than waste prevention because it is concerned simply with collection at the end-point of the solid waste stream, whereas waste prevention involves greater analysis and planning. Recycling is sometimes viewed as simply another means of disposal of unwanted material but with potentially positive revenue implications. Thus, many agency recycling programs are well-defined and have been operating for some time for certain high-value items. The Department of Defense, especially, has mature recycling programs, due in part, to its ability over the last decade to receive and use recycling revenue to help offset operating costs for a variety of environmental programs. The capability of all agencies to use recycling proceeds, as stipulated in Public Law 103-329, § 608 (see also Part 7, Retention of Funds, for more details about agencies retaining these revenues), should lead each agency to set specific recycling goals to maximize its recycling revenue. Also, many municipalities or states have set recycling goals, which Federal facilities are required by law

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Closing the Circle Award Winner

During fiscal Year 1994, 10,000 pounds of materials, including glass, paper, cardboard, and metal were recycled at the Arkansas National Wildlife Refuge, Texas. This required voluntary effort from the refuge staff to design and construct collection containers, and transport recyclables to the local recycling center.

The recycling program is being expanded to include the Matagorda Island Refuge and an estimated 165,000 pounds of scrap metal will be recycled through this effort. (Point of contact: Mr. Giezentanner.)

(RCRA 5 6001) to meet. But, as good neighbors, we should strive to go beyond compliance. (Note: Establishing and maintaining recycling programs are addressed in Part 7, Section 705).

Execution: Measuring Results

Measurement systems are important for effective waste prevention programs not only because data can be used to set realistic goals for the program and establish program priorities, but also because they allow managers to track and evaluate the progress of the waste prevention activities. By evaluating the program periodically, agencies can:

Keep track of program successes and build on them

Identify new ideas for waste prevention

Identify areas needing improvement

Determine the effect of any additions to the program

Keep employees informed and motivated

Recognize and reward their accomplishments

It is useful for agencies to determine their measurement strategy as they develop waste prevention goals and design waste prevention programs so measurement is an integral part of their efforts, rather than an issue to be

addressed later. A **measurement** strategy will help managers monitor the success of their **program** and allow them to report progress in meeting stated goals to the Federal Environmental Executive more easily and accurately.

Closing the Circle Award Winner

In 1991, the Washington Army National Guard (WAARNG) identified vehicle maintenance as the largest contributor to waste production. Captain Gordon Mathews, WAARNG's Hazardous Waste Program Manager, led the development and implementation of an integrated waste reduction program (Solvent Reduction Program) that involves the use of less toxic solvents, more efficient storage and filtering devices, and extensive recycling. The implementation of this program significantly reduced the facility's hazardous waste stream from 80,000 to 6,000 pounds during a four year period from 1991 to 1995. This effort also saved taxpayers \$22,000 in disposal costs and has reduced the flow of toxins into the local environment.

Waste Prevention Resources

To order the following EPA documents on waste prevention, call the RCRA Hotline at (800) 424-9346 or TDD (800) 553-7672 for the hearing impaired. In Washington, DC, call (703) 412-9810 or TDD (703) 412-3323.

Business Guide for Reducing Solid Waste (EPA530-K-92-004). This comprehensive, practical guide offers step-by-step suggestions for designing and implementing a waste prevention program.

Waste Prevention Pays Off: Companies Cut Waste in the Workplace (EPA530-K-92-005). This collection of brief case studies describes how companies and municipalities have cut costs by preventing waste.

Environmental Fact Sheet: Municipal Solid Waste Prevention in Federal Agencies (EPA530-F-92-016). This fact sheet outlines efforts under

way by Federal agencies to reduce waste and briefly explains how to start a waste prevention program.

Paper-Less Office Campaign: An Agencywide Waste Prevention Program (EPA530-F-94-012). This brochure outlines EPA's campaign to reduce the amount of paper used throughout the Agency by a variety of methods, including double-sided copying and electronic communication.

To order the following EPA document on pollution prevention, contact the Pollution Prevention Information Clearinghouse at (202) 260.1023. *Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12865, and Beyond* (EPA-300-E&94-013). This document is designed to assist Federal agencies in developing pollution prevention strategies, in accordance with Section 3-301 of Executive Order 12856.

An Environmental Innovator

The efforts of Kenneth P. Philipak, Manager, Maintenance Operations, U.S. Postal Service, St. Louis Bulk Mail Center netted big environmental dividends. Mr. Philipak advocated the implementation of environmentally preferred batteries as part of the planning of the facility. Using dry cell maintenance free batteries not only eliminated the need for a battery charging room, but also eliminated the hazards from lead, hydrochloric acid and hydrogen gas associated with wet cell batteries. The maintenance free batteries greatly reduced the hazards to those employees who were responsible for using and maintaining the motorized forklifts, tuggers and electric hand forklifts.

Goals for Increasing the Procurement of Recycled and other Environmentally Preferable Products

Information about recycled products and their procurement is provided in this guide, Parts 4, 5, and 7, as well as Appendices C and D. Environmentally preferable products information may be found in Part 5.



Part 7

Applicability and Other Requirements

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 order, shall include provisions that obligate the contractor to comply with the requirements of this order within the scope of its operations. In addition, to the extent permitted by law and where economically feasible, existing contracts should be modified.

Sec. 702.

Real Property Acquisition and Management. Within 90 days after the effective 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.

Sec. 703.

Retention of Funds. Within 90 days after the effective date of this order, the Administrator of GSA shall develop a legislative proposal providing authority for Executive agencies to retain a

share of the proceeds from the sale of materials recovered through recycling or waste prevention programs and specifying the eligibility requirements for the materials being recycled.

Sec. 704.

Model Facility Programs. Each Executive 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 electronic data interchange (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.

Contractor Operated Facilities

Many Federal agencies rely on private sector contractors to construct, manage, and/or operate their facilities. Sometimes contractors are even responsible for preparing technical specifications. Thus, contractors provide a direct link between the purchasing power of the Federal agency and the marketplace.

The Executive Order requires the Federal agency's procurement/contracting organization to include in all new contracts, provisions relating to the details of the agency's waste prevention, recycling, and affirmative procurement programs. Since contractors are purchasing goods and services on behalf of the Federal agency, they need detailed instructions on the part they will play in implementing the agency's policies. For example, construction contractors need to be aware they must use cement or concrete containing fly ash or ground granulated blast furnace slag as well as building insulation containing recovered materials. Or, as another example of waste prevention, the contracting office should specify to the service contractors the need for copied pages to be printed on both sides if the documents are submitted during the performance of the contract. Contractors creating specifications must be made aware of the agency's preference program to use products made with recovered materials when they meet the appropriate performance standards.

The agency contracting officer should establish the contractor's role during initial contact with the contractor and should reinforce these requirements, when appropriate, during subsequent meetings and correspondence. Older contracts may be modified periodically, opening the door to incorporating amendments related to this Executive Order.

Real Property Acquisition and Management

GSA and other Executive agencies have been given the task of including environmental and recycling provisions when they acquire leased space and when they construct new Federal buildings. Shortly after the Executive Order was signed, GSA amended their standard Solicitation for Offers (SFO) to require lessors to provide a recycling program in leases for more than 10,000 square feet of space and where occupancies are greater than 100 people, or to provide a justification for not doing so.

Prior to the Executive Order, GSA revised its *Facilities Standards for the Public Buildings Service*, PBS-PQ 100.2 to reflect the EPA's designation of cement and concrete containing fly ash, and building insulation. GSA will be updating the PBS-PQ 100.1 for additional items designated in EPA's May 1, 1995 CPG. In addition, GSA has embarked on a number of pilot projects. For example, GSA has formed a partnership with EPA to revise the SFO document for buildings leased for EPA occupancy. The revised SFO covers all aspects of structural, mechanical, and electrical engineering design, space management, and recycling of construction and demolition debris, building maintenance and cleaning, and use of recycled-content products such as gypsum wallboard, ceramic tile, carpeting, and

Retention of Funds

Executive Order 12873, Section 703 tasked GSA with developing a legislative proposal providing authority for all Executive agencies to retain a share of the proceeds from the sale of materials recovered through recycling or waste prevention programs. This is a real "business opportunity" to help Federal agencies offset costs of operating a recycling program. The Department of Defense has had this authority for a decade, and it has helped increase participation in recycling, and therefore, its revenue.