

27 March 1997

Re: NEPA Call-In Technical Inquiry 0039 - Federal Recycling Programs

Dear NEPA Call-In User:

This letter is in response to your March 5, 1997 request for information on the Federal requirements for recycling. Specifically, you would like to know what GSA is required to do concerning recycling. You would also like success stories, and information on building construction/design for recycling if available.

The following is a summary of the Federal guidelines and requirements for solid waste source reduction and also GSA guidance. We are providing copies of these guidelines on 3.5" diskette in text format (enclosed).

1. Title 40 Code of Federal Regulations (CFR) 245, "Promulgation Resource Recovery Facilities Guidelines," requires Federal facilities generating 100 tons or more of solid waste per day to establish a resource recovery facility to separate and recover materials and/or energy from this waste. Agencies shall consult with appropriate state and local agencies, and with concerned local citizens and environmental groups prior to initiation of market analysis and facility design and construction to determine what effects the project might have on local, regional, and state solid waste management plans for the area and determine the extent of prior resource recovery planning for the area. Part 245 recommends agencies having jurisdiction over facilities within a geographic area enter into joint resource recovery ventures among themselves and with nearby communities in order to maximize economies of scale.

2. Title 40 CFR 246, "Source Separation for Materials Recovery Guidelines," establishes regulations for the separation, collection, and recovery of solid waste including high-grade paper, newsprint, glass, aluminum cans, mixed paper, and corrugated containers. Part 246 recommends the establishment of public education and information programs regarding source separation, an investigation of markets by the organization responsible for the sale of recyclable materials in each Federal agency, certain levels of separation specific to the waste, methods of separation and collection specific to the waste, alternatives for transportation and storage of the waste, and a cost analysis of the segregated and non-segregated waste collection systems.

3. Title 40 CFR 247, "Comprehensive Procurement Guidelines for Products Containing Recovered Materials," requires Federal agencies and their contractors to buy 24 designated items with the highest recovered material content practical. These 24 items are: paper and paper products, engine coolants, re-refined lubricating oils, retread tires, structural fiberboard, laminated paperboard, carpet, floor tiles, patio blocks, building insulation products, cement and concrete containing coal fly ash or ground granulated blast furnace slag, traffic cones, traffic barricades, playground surfaces, running tracks, hydraulic mulch, yard trimmings compost, office recycling containers, office waste receptacles, plastic desktop accessories, toner cartridges, binders, and plastic trash bags. Procurement agents should require vendors certify the recycled material content, specifically identify the percentage of post consumer waste and other recycled materials in the product.

4. Title 40 CFR 273, "Standards for Universal Waste Management," establishes requirements for managing waste associated with batteries, pesticides, and mercury thermostats (universal wastes). The primary purpose of these regulations is to foster recycling of these wastes. Part 273 also sets standards for small and large quantity handlers of universal waste, transporters of universal waste, accumulation time limits, employee training, release response, shipping and tracking, destination facilities, and import and export requirements. Small or large quantity handlers of universal waste must manage them in a way that prevents the release of any universal waste or component thereof into the environment. Any universal waste showing evidence of leakage, spillage, or damage must be contained in a receptacle meeting the requirements for storage of the particular waste.

5. Title 40 CFR 244, "Solid Waste Management Guidelines for Beverage Containers," seeks to minimize solid waste and conserve energy by recycling and reusing glass, plastic, and aluminum beverage containers. Part 244 requires Federal agencies to place a nominal charge or deposit on the container at the time of purchase to encourage recycling. The deposit levied is a minimum of five cents unless the local area has an established return system in operation with a lower minimum deposit level. In this instance, Federal facilities may adopt a minimum deposit level equal to the locality's. If these requirements are not practical at some Federal facilities due to geographic or logistical problems of a local nature, a non-implementation report is to be submitted to the Environmental Protection Agency (EPA).

6. Executive Order (EO) 12843, "Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances," April 21, 1993, requires Federal agencies, to the extent practicable, to conform procurement regulation and practices to the policies and requirements of Title VI of the Clean Air Act Amendments; to maximize use of safe alternatives to ozone-depleting substances; to evaluate the present and future uses of ozone depleting substances; to revise their procurement practices and implement cost-effective programs both to modify specifications and contracts requiring the use of ozone depleting substances and to substitute non-ozone-depleting substances to the extent economically practicable; and to exercise leadership, develop exemplary practices, and disseminate information on successful efforts in phasing out ozone-depleting substances.

7. EO 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," August 3, 1993 requires each Federal agency to ensure all necessary actions are taken to prevent pollution with respect to the agency's activities and facilities. EO 12856 also requires Federal agencies to ensure compliance with the provisions and regulations in the Pollution Prevention Act (PPA) of 1990 and the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986. Each Federal agency must apply all of the provisions of this order to each of its facilities, including those facilities which are subject, independent of this order, to the provisions of EPCRA and PPA. Each Federal agency also must develop a written pollution prevention strategy to achieve the requirements specified in this order for the agency. EO 12856 also requires Federal installations to develop facility-wide pollution prevention plans, which outline how each facility will contribute to the agency's goal of reducing the total releases of toxic chemicals to the environment by fifty percent by December 31, 1999. To the maximum extent practicable, such reductions shall be achieved through the implementation of source reduction practices.

8. EO 12873, "Federal Acquisition, Recycling, and Waste Prevention,"

October 22, 1993, requires the head of each Executive agency to 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. Each agency 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. EO 12873 also requires agencies to establish goals for procurement of recycled and other environmentally preferable products, review the compliance with this order, and establish goals for solid waste prevention and recycling.

9. EO 12969, "Federal Acquisition and Community-Right-To-Know," August 8, 1995, requires Federal agencies, to the greatest extent practicable, to contract with companies who report in a public manner on toxic chemicals released into the environment. Federal agencies shall, to the maximum extent practicable, include in contract solicitations as an eligibility criterion for the award of competitive acquisition contracts expected to equal or exceed \$100,000, the requirement that such contractors must file a Toxic Chemical Release Form (Form R). Only contractors having Standard Industrial Classification Code (SIC) designations of 20 through 39 are subject to the eligibility criterion. The efficiency of the Federal government is served when it purchases high quality supplies and services that have been produced with a minimum impact on the public health and environment of communities surrounding government contractors. Savings associated with reduced raw materials usage, reduced use of costly, inefficient end-of-pipeline pollution controls, and reduced liability and remediation costs from worker and community claims all serve to increase the economic and efficient provision of essential supplies and services to the government.

10. ADM 2800.23, "Maximizing Purchases of Recycled Content Paper and Paper Related Products and Waste Prevention/Reduction," establishes GSA's policy to maximize the use of paper with recycled content and reduce the overall use of paper products in general.

NEPA Call-In contacted Mr. Jim Campbell, Energy Efficiency Clearinghouse, (800) 363-3732, for recycling success stories and building design for recycling. Mr. Campbell provided the success story titled, "The Ridgehaven Building: Lean and Green for a Municipal Office Building," Environmental Building News, January 1997. This article discusses building renovation using energy conservation measures and "environmental building materials" such as tile made from recycled glass. Mr. Campbell suggested we contact the Environmental Building news for success stories more specific to your request.

We contacted Ms. Mary Ann Bitner, Customer Service Representative, Environmental Building News, (802) 257-7300, who referred us to Hi-Rise Recycling, Miami, Florida.

NEPA Call-In contacted Mr. Rob Brunge, Marketing, Hi-Rise Recycling, (305) 624-9222. Mr. Brunge stated his company designs recycling systems for multistory buildings. Hi-Rise Recycling can retrofit existing structures or provide the design and equipment for new structures. Their recycling machines work in conjunction with trash chutes located on each floor. Each trash chute is equipped with a computer panel, and the user must select from the menu (glass, paper, aluminum, etc.) before depositing anything in the chute. The computer then controls which bin in the basement the materials are deposited in. This system not only eliminates the labor involved in carrying the materials to the basement, but also greatly

simplifies the sorting process. Mr. Brunge provided product information and success stories from their process (enclosed).

We also visited the Environmental Building News internet site located at: <http://www.ebuild.com>. Environmental Building News is a periodical for environmentally sustainable design and construction. Their web site provides listings of back issues, feature articles, product reviews, and other articles available for order. NEPA Call-In downloaded a list of feature articles for your review (enclosed). In a follow up call to you, you requested the listing and stated you would advise us of any articles you would like copies of.

We then contacted Mr. John Dawkins, Staff Engineer, Waste Reduction Resource Center, (919) 715-6500, who provided the following:

1. "Building Pollution Prevention into Compliance and Enforcement: New Opportunities for Federal Facilities," remarks of James R. Edward, Director, Planning, Prevention, and Compliance Staff, Federal Facilities Enforcement and Compliance Assurance, U.S. Environmental Protection Agency (EPA), August 14, 1995. This article discusses what EPA is contributing to innovation in environmental protection;
2. "Pollution Prevention Electronic Design Guideline: A Tool for Identifying Pollution Prevention in Facility Design," Frank L. Greitzer, undated. This article describes the software tool, "Pollution Prevention Environmental Design Guide for Engineers" which provides opportunities to incorporate pollution prevention features into design projects.

NEPA Call-In contacted an Environmental Executive, GSA, who stated they did not have any recycling success stories or information on buildings designed for recycling.

We are enclosing "Sustainable Building Technical Manual"; cosponsored by Public Technology, Inc.; U.S. Green Building Council; and the U.S. Department of Energy; 1996. This publication addresses green building design, construction, and operations to include recycling considerations. Of particular note are the sections on Pre-Design, and Operations & Maintenance which address building design and recycling. The publication also mentions an American Society for Testing and Materials (ASTM) Standard (E-50.06.10), "Source Separation of Recyclables in Commercial and Multi-Tenant Buildings," which is currently in development.

NEPA Call-In then contacted ASTM, (610) 832-9555, to determine when the above mentioned standard would be available. Their representative stated E-50.06.10 has not been published, and there is no expected publish date at this time.

A search of our files disclosed the following documents (enclosed):

1. "A Check List for Sustainable Architectural Design," Mr. Gregg Ander, American Institute of Architects (AIA), Sustainable Architecture, Number 5, undated;
2. "AIA Library and Archives," The American Institute of Architects, undated. This document lists video tapes of recycling success stories and sustainable architectural design to maximize recycling. In a follow up call, you requested the list of video tapes and stated you would advise us of the videos you would like copies of;
3. "Sustainable Design: A Pollution Prevention Strategy for Building

Design and Construction," Mr. Mark Loeffler and Mr. Howard Brown, Pollution Prevention Review, Summer 1996; and

4. "WMX," WMX Technologies Incorporated, undated. This document is a success story/brochure for "environmentally friendly design" of office space.

Lastly, we are in the process of contacting each of GSA's regional offices for success stories. We will provide this information to you in a follow up to this letter.

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Sincerely,

(Original Signed)

NEPA Call-In Researcher