

RECYCLING

MANAGER

The independent weekly guide to secondary materials markets

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City is fined by state

PHILADELPHIA
The financially hard-pressed city of Philadelphia has been hit with a \$40,000 bill as a penalty for failing to meet the state deadline for citywide curbside recycling.

The Pennsylvania Department of Environmental Resources, which originally sought \$500,000 in penalties for failure to extend recycling throughout the city, reached a consent agreement which requires recycling across the entire city by March 1994.

The agreement, which corresponds with the city's previously announced curbside expansion schedule, also frees some \$1.2 million in state recycling grants. The funds, intended to pay for 23 recycling trucks, had been withheld from the city by the state.

As part of the agreement, the city will set

up drop-off points for plastic, milk and soft-drink bottles in northwest neighborhoods similar to those set up earlier in northeast neighborhoods when the frequency of curbside collections was reduced from weekly to biweekly.

At present, curbside programs cover only about 160,000 homes. According to the consent order, 48,000 homes will be added starting this week, there will be another 277,000 by Nov. 30, 1993 and the final 82,000 will be added by March 31, 1994. If the city fails to meet expansion deadlines under the agreement, Philadelphia will be hit with a \$250-per-day penalty.

Present plans call for collections every other week, but if quantities of recyclables lag, collections could drop to a monthly schedule, as permitted by state law, officials said. ☼

• MARKET NEWS •

Evaluation completed

CHICAGO
Rubbermaid Inc. and Dow Chemical Co. said they have completed a successful joint pilot evaluation by recycling 100,000 pounds of postconsumer stretch film into specially designed formulations for Rubbermaid's new recycled-content commercial products.

Rubbermaid is now commercializing the business of using postconsumer stretch film for recycled-content commercial products and plans to expand the use of recycled stretch film in its Home Products Division.

Dow is also sharing what was learned through the program with such industry groups as the Automotive Industry Action Group and the Grocery Industry Committee on Solid Waste to develop industry guidelines for effective use and recycling of stretch film.

As part of the joint project with Rubbermaid, Dow worked with Resource Plastics Corp., a plastics recycler in

Brantford, Ontario, to research techniques for reprocessing stretch film to blend into Rubbermaid's product.

Officials said the postconsumer polyethylene film worked well for Rubbermaid's injection molded products because stretch film resins are highly engineered for strength and toughness, and the same performance characteristics can be attained even after recovery from the disposal stream.

Polycoat program launch

SEATTLE
Three Northwestern companies will team up in a recycling program intended to divert up to 70 tons per day of recyclable polycoated paper from landfills following the completion of a feasibility study for the material, which is paper coated with polyethylene plastic that is used for such products as milk cartons and fast-food packaging.

TetraPak, Weyerhaeuser Paper Co. and

SPOTLIGHT ON PRICES

• METAL •

Although December is traditionally a slow season, mills in most parts of the country were paying ferrous scrap suppliers \$2-3 more per ton last week for deliveries scheduled through the end of the year. Some market sources, who had anticipated the increase in demand and pricing following higher bids for industrial bundles a week earlier, attributed it to increasing mill production levels, shortages of scrap on hand and the building of inventories in anticipation of a long, cold winter that would slow scrap collection. Some midwestern dealers noted that U.S. Steel had delayed a blast furnace reline at its Edgar Thomson Works near Pittsburgh because of an increase in the volume of orders that need to be filled and noted that a large melt program had been scheduled this month at CF&I Steel Corp. in Pueblo, Colo. Other mills, however, were reported to be delaying purchases late in the week, giving some uncertainty to parts of the market, including the West Coast, where no changes had yet been recorded.

Aluminum used beverage can prices continued to show strength in most areas as market sources noted that supplies are tight and that other grades of aluminum have also been strengthening in recent weeks.

Darigold, a major Northwest dairy products distributor, will combine forces in the recycling program with Weyerhaeuser extending a guarantee of \$150 a ton for polycoated papers over the next five years while Darigold will eliminate wax-coated paper from its ice cream cartons while replacing it with double-sided polycoated paper.

The study of recycling market options for polycoated paper was headed by the Clean Washington Center, a division of the Washington State Department of Trade and Economic Development, and brought together more than 20 local experts from the recycling, paper and pulp industries.

—Valerie Ryan

Electronic sorting used

JACKSONVILLE, Fla.
Browning-Ferris Industries has switched to an electronic system to help it accumulate cleaner batches of aluminum used beverage cans at its sorting plant here.

Continued on page 3

• RECYCLABLE MATERIALS PRICES •

ISSUE DATE: DECEMBER 7, 1992

Prices based on representative volumes delivered to end user or consumer in each metropolitan market area unless otherwise stated. Prices are the opinions of editors and correspondents based on contacts with originators, scrap processors, dealers, brokers and end users or consumers in the previous week. Prices generally represent truckload quantities of baled, high quality, well separated materials meeting the specifications of local market buyers.

	BOSTON	NEW YORK	WASH., D.C.	ATLANTA	MIAMI	DETROIT	CHICAGO	CLEVELAND	EAST TEXAS (b)	DENVER	NORTHWEST (e)	LOS ANGELES
METALS												
Ferrous (\$/ton)												
Used steel cans(c)	35-40(d)	42-45(d)	45-50	58-62	45-50(d)	68-70(d)	70-75	79-83(d)	63-68	32-35(d)	33-37	35-39
No. 2 bundles(c)	36-38(d)	40-42(d)	40-46	60-65(d)	36-40	65-70(d)	70-72	55-60(d)	58-68	52-54(d)	63-66	63-66
Shredded auto scrap(c)	82-85(d)	87-90	88-91(a)	90-96(d)	83-88	87-95(d)	94-96	88-95(d)	85-95	80-84	96-98	97-99
Nonferrous (¢/lb.)												
Aluminum UBCs(c)	39-41	39-40	38-40	36-38(d)	38-40(d)	36-38(d)	39-40(d)	36-38(d)	38-39	34	35-36	36-39
Auto batteries(c)	4-6	4-6	4-6	4-6	5-7	6-7(d)	5-6(d)	5-6	6-9(d)	4-6	5-6	5-6
PLASTICS												
Sorted (¢/lb.)												
Clear PET(c)	7-10(d)	6-9	4-6	6-8(d)	5-6(d)	6-8(d)	4-6(d)	3-4	5-6(d)	4-5	4-5(d,f,i)	4(j)
Green PET(c)	6-8(d)	4-6	4-6	6-7(d)	3-5(d)	4-6(d)	2-3(d)	2-3	5-6(d)	4-5	4-5(d,f,i)	4(j)
Natural HDPE(c)	8-10(d)	6-8	7-9	5-8(d)	7-9(d)	7-8(d)	4-6(d)	4-7(d)	8-9	9-11	8-10(d)	10
Unsorted (¢/lb.)												
Mixed HDPE(c)	3-5(d)	3-5	3-5	2-4(d)	3-5(d)	4-5(d)	0-2(d)	0-2	3-4(d)	6-8	5-7	5-6
Mixed PET(c)	5-7(d)	3-4	3-5	4-6(d)	3-5(d)	2-4(d)	3-5(d)	2-3	6-7(d)	5	3-4(f)	4(j)
Mixed HDPE & PET(c)	1-2(d)	0-2	1-3	0-1	2-3(d)	0	0-2(d)	0	0	NA	0	1-3
PAPER (\$/ton)												
Corrugated(c)	25-35	20-25(d)	25-30(d)	30-35(d)	35-44(d)	25-30(d)	20-25(d)	15-20(d)	30-35	35-50	50-55	55-60(d)
Old newspaper(c)	10-15	10-15(d)	10-20(d)	5-10(d)	10-20(d)	15-20(d)	15-22(d)	10-15(d)	15-20	35-40	28-33	35-45
High grade office(k)	65-70	35-45	50-60	10-15(d)	35-40	25-30(d,i)	25-35(d,i)	35-45(d)	40-45(i)	NA	70-75	10-15
File stock(c)	50-55	30-35(d)	35-40	30-35(d)	55-70(d)	30-35(d)	30-35(d)	30-40(d)	55-65	40	10-20	35-45
Colored ledger (c)	85-95	60-65(d)	50-55	50-70(d)	75-85(d)	60-80(d)	45-55(d)	60-80(d)	50-60	55-65	60-80	80-90
White ledger(c)	160-165	130-140(d)	150-160	150-165(d)	125-145(d)	150-160(d,i)	135-145(d,i)	140-150(d)	135-145(i)	115-120	150-175	165-180(d)
Computer paper(c)	240-245	250-260(d)	245-260	210-250(d)	250-280(d)	170-180(d)	170-180(d)	180-210(d)	190-220	255-265	270-295	275-280(d)
GLASS (\$/ton)												
Clear	40-45	35-40	40-50(d)	40-50(d)	30-40(d)	27-32(h)	40-50(g)	40-50	40-50(g)	55(d)	40	55-65
Green	10-15	0-5	0-10(d)	30-35(d)	0-7(d)	0-5(h)	5-35(g)	15-25	10-15(g)	45(d)	5-7	5
Brown	35-40	15-25	30-35(d)	20-25(d)	20-25(d)	12-15(h)	15-25(g)	30-40	30-40(g)	55(d)	20	15-25

Footnotes:

- NA - Representative quotes not obtainable in this market.
- a - Broker buying prices for materials shipped out of local market area; baled, densified truckload quantities.
- b - Includes Dallas/Ft. Worth and Houston metropolitan areas.
- c - Specification from ISRI Scrap Specifications Circular. High-end prices are generally for materials matching this specification.
- d - Loaded flat-on-board cars in local market.
- e - Includes Seattle and Portland metropolitan areas.
- f - Seattle prices only.
- g - Semi-crushed and cleaned.
- h - Semi-crushed, not cleaned.
- i - Truckload quantities loose, not baled.
- j - Unsubsidized price level in predominantly subsidized market.
- k - A mixture of white ledger, computer and other similar forms of high grade papers including file stock.

WE WELCOME SUGGESTIONS

Your comments and suggestions on Recycling Manager's pricing reports are welcome. Give us information on specific purchases or sales including the identities of the seller and buyer, the timing of the transaction, what volumes were involved and how the material was delivered including freight arrangements and value-added processing. If you wish, your identity can be kept in confidence. We will check the information and include the results of that research in future issues. Send your comments and suggestions to Recycling Manager at 825 Seventh Ave., New York, N.Y. 10019 or call 718-398-3485.

MARKET NEWS

Continued from page 1

The system was installed last March on a commingled container sorting line which had earlier had one of BFI's earliest container sort systems using low-cost labor to hand sort much of the material.

But problems of that line had included missed plastic bottles, steel cans that were not picked up by an overhead magnet and glass pieces too small to sort by hand.

Since switching to a Model M2 electronic aluminum separator from Charter Resources of Salt Lake City, which incorporates eddy-current separators to recover aluminum UBCs, recovery efficiency has been rated at 91 percent, an official said.

Oil from plastic advance

TOKYO

Toshiba Corp. said last week it is developing the world's first technology for reclaiming fuel oil from chloride-based plastics without emitting a poisonous gas.

Chloride-based plastics, accounting for 25 percent of all plastics, have posed a refuse problem because they release hydrogen chloride, a poisonous gas, into the air during conventional heat decomposition, a company spokesman told UPI.

The new technology can be applied to thermoplastics, which are approximately 80 percent of all plastics, that decompose when exposed to heat, Toshiba researchers said.

In conventional fuel reclamation processes, smashed plastics are put into a reacting chamber to be heated into a gaseous state. On cooling, fuel oil is retrieved, but the process generates hydrogen chloride.

Toshiba researchers have found that by adding a high-density alkaline solution to the reacting chamber during the heating process the hydrogen chloride is transformed into a harmless salt, enabling the fuel oil to be reclaimed without generating the gas.

The new technology can also be applied to other plastics which resist the heating process, and the oil retrieval rate increases from 50 percent to 90 percent, he said.

News bedding growing

MT. HOREB, Wis.

Sales of shredded newsprint for use as animal bedding for \$60 a ton are making considerable headway against traditional wheat and oat straw, which can cost three times as much, according to officials of Agri-Paper Co., here.

Agri-Paper has gone from supplying 30 tons a month of orders in 1990 to current volumes of 500 tons a month and expects demand to almost double in 1993, said Todd Seiler, the company's sales manager.

After use as bedding, the newspaper mixed with manure can be deposited on fields as fertilizer. Because it is made of organic wood fiber and has already been partially broken down, it decays much faster than corn stalks or straw.

Seiler said the company has had difficulty getting adequate supplies from its main suppliers in Wisconsin, Minnesota and Illinois and is seeking additional suppliers of 95 percent clean unbaled paper.

—Anita Jenke

Market strategy set

SEATTLE

A strategic plan to build Washington state markets for five priority commodities over the next five years has been developed by the Clean Washington Center working with industry and local governments.

The plan calls for building collections of glass to 72,000 tons in 1997 from 45,000 tons in 1990, plastics to more than 200,000 tons from 15,900 tons, mixed paper to 400,000 tons from 100,000 tons this year, tires to 50,000 tons from 40,000 tons, and

yard waste to 651,000 tons from 495,000 tons in 1990.

The strategies are designed to address the problems of scale necessary to produce long-term results while achieving short-term gains and include development of new products, creation of products resulting from improved sorting and developing high value products.

Foam compression tried

SYRACUSE, N.Y.

Mobil Chemical Co. is planning to launch a test program to convert used plastic foam trays, cups and bowls from school cafeterias into plastic bricks for recycling.

The company is awaiting a permit from the New York state Department of Environmental Conservation to install and operate the experimental plant at Fowler High School, where meals are prepared for all schools in Syracuse.

Mobil's Plastic Packaging division, Pittsford, N.Y., wants to install five ovens — which are called thermal densifiers — at the school to monitor their performance. According to the company, the dishwasher-sized ovens will heat the foam at a constant temperature of 400 degrees Fahrenheit, reducing the foam volume and enabling it to be pressed into 25-pound blocks.

Syracuse schools currently recycle about 3 tons of polystyrene each month.

Chapter 11 filed

WASHINGTON

Recycling Concepts Inc., Lorton, Va., a paper recycling business with assets of \$150,000 and liabilities of \$168,832, has filed for Chapter 11 reorganization in federal bankruptcy court.

Under Chapter 11 of the federal bankruptcy code, a company is protected from claims by creditors while it attempts to reorganize its finances under a plan approved by the court.

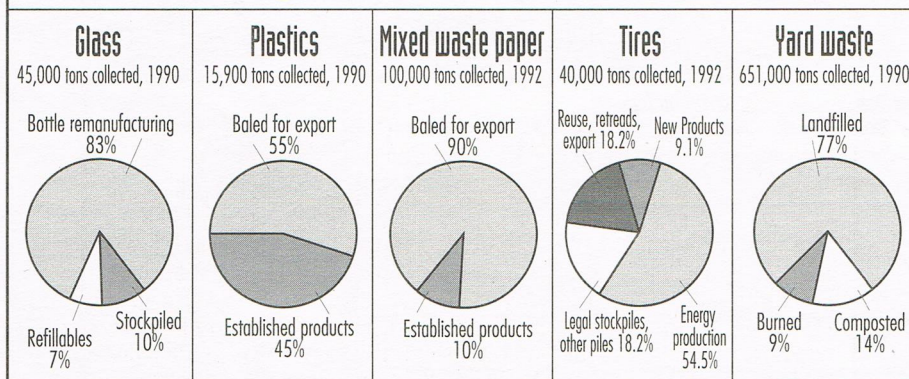
Plant's ferrous sold

WEST PALM BEACH, Fla.

David J. Joseph Co., Cincinnati, is working with a municipal waste-to-energy facility here to process and market ferrous scrap recovered from the burn plant.

Under the agreement with the city's solid waste authority, Joseph expects to recover at least 30,000 tons of iron and steel scrap annually. Rail cars owned by Joseph will be used to transport the processed material to various markets, according to an announcement by the company's Municipal Recycling division. ☼

Washington State Recyclable Markets



Source: Clean Washington Center

• LEGISLATIVE AND REGULATORY ROUNDUP •

Federal

Two long-awaited environmental regulations were issued last week by the Bush administration to address ozone depletion and pollution from sewage sludge.

The Environmental Protection Agency proposed a rule that would require federal certification for technicians who remove ozone-depleting chlorofluorocarbons (CFCs) from air conditioners and refrigerators.

The rule, which expands on a provision of the 1990 clean air act prohibiting the release of ozone-depleting substances, had been held up by the Office of Management and Budget, which was concerned that small businesses would be harmed by a certification requirement.

The rule is aimed at preventing CFCs and other ozone-depleting chemicals from being released into the atmosphere when air conditioners and refrigerators are either disposed of or serviced. More than half the ozone-depleting emissions from these products occur during those times, according to the EPA.

Under the rule, recovery and recycling equipment must be certified by the agency before it may be used to remove CFCs. In addition, the rule requests public comment on a proposal to require individuals who service air conditioning and refrigeration equipment to pass an EPA-approved test. The latter represents a "compromise" between the budget office and the EPA, according to Stephen Seidel, deputy director of the agency's Global Change division.

Separately, the EPA proposed a rule that would establish procedures for the use of processed sewage sludge as fertilizer and landfill.

Fifteen years in the making, the regulation would for the first time set comprehensive standards for the use of sludge, which is a by-product of the treatment of wastewater

from homes, businesses, and industries.

As landfills and other disposal sites become less available, sewage sludge is increasingly being recycled as a fertilizer and to reclaim lands destroyed by strip mining or erosion. Critics, however, have warned that these practices could increase pollution.

Nina Sankovitch, an attorney for the Natural Resources Defense Fund, said the group objected to the EPA's decision to create three different tiers for sludge quality, depending on whether it is used on farmland or for home gardens. Instead, she contended that a single, strict standard should apply.

But J. Patrick Nicholson, the chief executive officer and founder of N-Viro Energy Systems Limited, a Toledo-based recycler of organic wastes, including sewage sludge, said, "We welcome these new regulations. We've proven you can recycle sewage sludge according to these regulations and be economically successful doing it."

"N-Viro's process and its N-Viro Soil product have met the requirements for disinfection, pollutants and vector control or long-term stabilization from day one," Nicholson said.

According to Christopher Mahoney, vice president of sales, N-Viro Soil's annual production growth has increased from nearly 200,000 tons in 1990 to nearly 500,000 tons in 1991 to approximately 1 million tons this year.

Mahoney said the EPA regulations are economically viable for N-Viro although other existing technologies do not meet the regulation's requirements. He said heat-dried pellets lack long-term stability, and composted material experience a regrowth of pathogens and therefore do not achieve complete disinfection.

Martha Prothro, the EPA's deputy assistant administrator for water, said that sewage

sludge in the U.S. is "pretty good quality in general" and that "most municipalities are already in compliance with the rule."

The EPA said that the final rule concerning CFCs would be issued in April and that it would finalize the sewage sludge rule soon.

□□□

The Environmental Protection Agency in partnership with the Alliance for Environmental Education, Warner Bros. and the National Environmental Education & Training Foundation is launching an environmental education initiative targeted at third and fourth grader students.

"Tweety's Global Patrol" is described as a multifaceted elementary education program featuring Warner Bros. animated character Tweety and his famous foe, Sylvester, in which they will be used to convey environmental messages urging young children to reduce, reuse and recycle. The program will include tested educational materials for in-classroom use, public service television announcements and print support.

Educational materials for the program have been sent to 70,000 classrooms across the nation and public service announcements are being distributed to stations in the top 100 markets in the United States in addition to television networks and cable outlets.

A number of promotional partners and licensees have already signed on to support and participate in the program, with a percentage of the proceeds earmarked to fund environmental education. One such partner, Your Favorite Producer, is printing "Tweety's Global Patrol" messages on more than 500 million milk and juice cartons in schools nationwide. Among the distributors of the beverage cartons will be the Los Angeles Unified School District, which is currently running the largest recycling program in the nation. ☼

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