



# Pollution Prevention News

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To be added to our mailing  
list, please write:

Pollution Prevention News  
U.S. EPA  
401 M Street SW (PM-219)  
Washington, DC 20460

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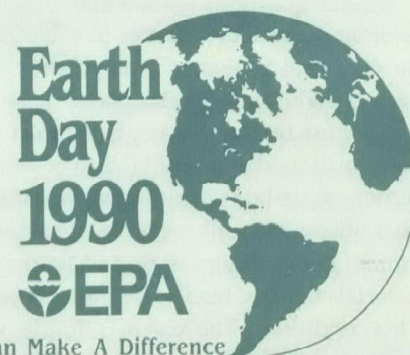
## Editor's Corner

By now, all our readers are probably aware of the upcoming 20th anniversary of Earth Day on Sunday, April 22, 1990. Like the original event, this year's Earth Day will be both a celebration of the planet and an expression of concern over the many threats to its health.

Earth Day 1990 is serving as a prime opportunity for EPA's launching of a number of pollution prevention initiatives and a long-term educational campaign. EPA's Administrator William Reilly has noted that "we must start preventing pollution as the primary means of meeting our environmental objectives." And President Bush, in signing his first proclamation of the new decade — the Earth Day Proclamation — declared, "We must...seek solutions that embrace all sectors of society in preventing pollution and ecological damage before they occur."

One of the hallmarks of this year's observance is the opportunity to make a personal as well as collective commitment to the protection of the environment — whether by planting a tree, committing to energy conservation, buying recycled products, or a host of other actions. Earth Day 1990 activities will include planting a billion trees, parades and gatherings in cities all over the world, an Earth Week Expo to be held in George, WA., "teach-ins" at schools, media campaigns, and wearing green clothing on Earth Day itself.

EPA's Earth Day theme is: "Think Globally and Act Locally: You Can Make a Difference." To promote this idea, EPA will be distributing a variety of brochures and videos, and mailing a special January/February edition of the EPA Journal (devoted entirely to Earth Day) to junior and senior high school science teachers. And a 4th grade teacher's activity guide will be



You Can Make A Difference

distributed to elementary schools across the nation.

EPA also is helping to bring together environmental and business groups in an "Environmental Partnerships" event on the Mall in Washington the week before and after Earth Day. At this event, an environmental town will be constructed on the Mall, including display booths for 50 award winners — one from each state — from Renew America's Searching for Success awards program.

This month we bring you several views on the issue of biodegradable plastics, plus a special section on state and regional activities, featuring one of the leaders in pollution prevention, Massachusetts. To reflect on the progress made at EPA in pollution prevention over the past year, we present an interview with the director of our office, Jerry Kotas. This issue marks the beginning of our second year of *Pollution Prevention News* and we are pleased by the interest shown in our publication. We also would like to hear more from you, our readers — please do send us letters and articles about your activities and your perspectives on pollution prevention. Space limitations being severe, we cannot promise to publish everything, but we will try our best.

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# FORUM: Biodegradable Plastics

## Right Question, Wrong Answer

by Dr. Richard A. Denison  
Senior Scientist,  
Environmental Defense Fund

The current fascination with trying to make plastics biodegradable is the wrong answer to the right question. Fueled by an aggressive corn industry lobby eager to find new markets, the developers of biodegradable plastics tout environmental benefits that are either non-existent or have yet to be demonstrated.

Serious questions remain about the ability of biodegradable plastics to solve *any* of the very real problems that plastics pose. First, the ability to make plastic that will degrade in a reasonable length of time under real-world conditions remains to be proven. Recent excavations of decades-old landfills have uncovered still recognizable newspaper and even banana peels and hotdogs — materials that are readily degradable under other conditions. The reason is simple: well-operated landfills lack two ingredients critical for biodegradation: air and water. In all likelihood, biodegradable plastics will suffer the same fate.

Second, biodegradable plastics threaten to derail the most promising approach to managing plastics: recycling. "Contamina-

tion" of recycled plastics with photo-degradable or biodegradable agents could obviously wreak havoc on durable goods (e.g., plastic lumber) made from them.

Third, even if biodegradables "work", what do they degrade into? The term "biodegradable plastic" is really a misnomer, since it is not the plastic but the starch or cellulose added to it that degrades, leaving behind a less visible but more dangerous "plastic dust." Plastics are manufactured using all sorts of toxic additives: lead and cadmium pigments and stabilizers, for example. While such toxins remain relatively inert in roadside plastic litter or in a landfill, once the plastic degrades and releases them, they pose far greater risk to our health and environment.

Finally, widespread introduction of bio-

degradable plastics may actually increase plastics use and even littering. Because of the addition of starch or cellulose, more plastic is needed in bags and containers to provide the same strength as ordinary plastic. And fewer people might think twice before tossing away a candy wrapper if they are led to believe it will magically disappear.

The false promise of biodegradable plastics threatens to divert our attention from the real solutions to plastics pollution and the solid waste problems we face. Recycling of plastics holds promise and is growing — but biodegradable plastics will only increase the technical and attitudinal barriers that must be overcome.

Reduce. Reuse. Recycle. For plastics as for other parts of our waste, these are the environmentally sound options.

by Cathy Guisewite



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## Is Degradability a Solid Waste Solution?

by Jean C. Statler  
Vice President, Communications  
Council for Solid Waste Solutions

As Americans become more concerned about the shortage of acceptable land fill space for waste disposal, many have latched onto the idea of degradability as a solution to the problem. Public opinion surveys show overwhelming support for "biodegradable" waste materials. This is unfortunate. The prospect of garbage that simply "disappears" once it is discarded is certainly attractive, but unrealistic. Recent investigations into the nature of landfills reveal that in a modern landfill very little degrades quickly enough to open up free space or extend the life of a landfill. Even materials that are commonly considered degradable (grass clippings, food wastes, newspapers, etc.) have been found in a state of mummification after 10 to 20

years of burial.

The plastics industry is concerned that the public's desire for biodegradability has the potential to interfere with plastics recycling technology and divert attention from real solutions such as recycling, source reduction, and waste-to-energy incineration.

The plastics industry believes that there are tangible solutions to the solid waste dilemma existing today, one of these being recycling. Through increased recycling of all materials, we can dramatically reduce the amount of waste destined for landfills. The plastics industry has taken the initiative, through the formation of the Council for Solid Waste Solutions, to implement comprehensive recycling programs in communities around the country. Hundreds of communities currently are recycling plastics and the number is steadily growing. More than 20% of all plastic soft drink bottles currently are being recycled, and the plastics industry is committed to building a national

infrastructure for plastics recycling.

For example, in October 1989, the National Polystyrene Recycling Company was formed by seven polystyrene manufacturers with a goal to recycle 25% of all disposable polystyrene products by 1995, more than the current rate of paper and glass recycling. In April 1989, Du Pont, with Waste Management, Inc., the largest U.S. waste hauler, announced a plan to develop the largest plastics recycling and reprocessing operation in the country. The first facility will be constructed in Philadelphia this year.

Members of the plastics industry are continuing research into the area of "biodegradable" plastics because we believe that there may be worthwhile applications for such material; however, biodegradability cannot be looked to as a solution to the solid waste disposal problem. We look forward to continuing our work with government, industry, environmental and consumer groups toward solutions that really will work.



# States and Regions: Massachusetts

## Toxics Use Reduction in Massachusetts: The Whole-Facility Approach

by Dr. Manik Roy  
Source Reduction Policy Coordinator  
Massachusetts Dept. of Environmental Protection

Since 1987, the Massachusetts Department of Environmental Protection (DEP, formerly the Department of Environmental Quality Engineering) has been developing and implementing a strategy to make toxics use reduction the environmental protection approach of first resort in Massachusetts. DEP's primary thrust is to develop a "whole-facility" approach to its outreach, permitting, and compliance activities — thus taking the next step beyond the current "one-pipe-at-a-time" approach.

### The "One-Pipe-At-A-Time" Approach

There is a fable about a group of blind monks who come upon an elephant in the road. One monk grabs the elephant's trunk, one its tusk, one its ear, one its leg, and each monk sees in his mind's eye a completely different animal than that seen by his co-travellers.

In developing environmental protection policy, our society has been similar to this group of monks. Some of us have focused on air problems and have developed an approach to solving them. Those of us focusing on water problems have developed a distinctly different approach, as have those focusing on the transportable waste (RCRA) problem. These approaches are manifested in federal and state statutes, in the structure of EPA and state environmental agencies, and in their regulations and procedures, which each tend to focus on only one "pipe" through which pollution can leave a facility.

Among other things, a one-pipe-at-a-time approach makes it difficult for any one agency decision-maker to know everything the agency knows about any one regulated facility. By the same token, despite the best efforts of the agency's staff, the total effect of requirements imposed by the agency on any one facility is rarely considered by the agency. Invariably, a facility will be subject to requirements that collectively are confusing and that at worst, run at cross purposes to each other.

An agency's one-pipe-at-a-time approach can also foster a one-pipe-at-a-time approach in the regulated community. For example, a company required to (a) control its volatile organic compound emissions to the air one year; (b) control the total toxic organic content of its waste water two years later; and (c) account for the ban on land disposal of solvent waste two years after that, may treat these requirements as individual problems, developing separate air emission, wastewater treatment, and RCRA-waste management strategies. Had the company been presented with all the requirements simultaneously, it might have had more incentive to reduce its solvent use as part of its strategy to address all three requirements.

Also, companies react to the uncertainty and confusion surrounding compliance requirements by giving one person or group of people primary responsibility for compliance. Paradoxically, while this helps the company collect information about compliance requirements and technologies from the outside world, it weakens the company's ability to use toxics use reduction as a compliance

strategy, by removing the environmental compliance staff from mainstream production decisions. It is not unusual to meet industry environmental compliance officers who say, "I am probably one of the few people at my company who does not know how the production line works." They are busy enough staying informed of the regulatory requirements faced by their companies and operating their companies' pollution control equipment. Sometimes the internal political structure of a company will specifically exclude the environmental compliance staff from production decisions. All this inhibits the company's ability to "meddle" with the production process as a means of preventing pollution.

### The Bureau of Waste Prevention and the Whole Facility Approach

For over three years, DEP has been developing an approach that treats each regulated facility as a whole entity. A Bureau of Waste Prevention was formed in 1988, combining hazardous waste management, air quality control, industrial wastewater management, solid waste management, and right-to-know programs. Currently, the Bureau has established 11 cross-program workgroups, including:

- The *Blackstone Project Team*, which is examining alternative approaches to inspections, enforcement, and technical assistance (see inset);
- The *Cross-Media Permitting Project Team*, which will test different models of coordinating permitting across media as a means of promoting waste prevention and improving staff efficiency;
- The *Facility Master File Workgroup*, which is developing a centralized cross-department database system; and
- The *Bureau of Waste Prevention Reorganization Workgroup*, which is assessing the effectiveness of different organizational

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### The Blackstone Project

The Blackstone Project is a joint pilot project of Massachusetts' DEP and Department of Environmental Management (DEM). The primary FY 1990 objectives of the project are:

- (1) to evaluate alternative DEP inspection models in order to coordinate the work of DEP inspectors in the air, water, hazardous waste, and right-to-know programs, and thereby develop procedures for treating industrial firms as whole facilities;
- (2) to evaluate alternative DEP enforcement models in order to encourage violators to use toxics use reduction as the primary means of compliance; and
- (3) to evaluate alternative modes for coordinating DEP's regulatory activities with DEM's technical assistance activities.

To receive bimonthly and final reports on both the Blackstone and Cross-Media Permitting Projects, contact Walter Hope at (617) 292-5953.



# States and Regions: EPA Region 1

## New England Pollution Prevention Council

by Nancy Lewis  
EPA Region 1

The centerpiece of EPA Region 1's pollution prevention program is the New England Pollution Prevention Council, which is co-chaired by Regional Administrator Julie Belaga and John Gould, Executive Director of Associated Industries of Massachusetts. The Council brings together leaders from government, corporate, academic, environmental, and community sectors to promote pollution prevention and to serve as a forum for discussing New England's pollution prevention issues. Its basic mission is to identify barriers to pollution prevention and put forward projects to surmount them. The Council is developing a New England pollution prevention agenda, with assistance from EPA Region 1 Pollution Prevention Program staff.

The Council held its first meeting on November 28 in Boston. In an enthusiastic interchange, Council members reviewed a variety of pollution prevention activities already underway in the region, including:

- Polaroid Corporation's "Toxic Use and Waste Reduction Program," which includes an employee educational/motivational newsletter and periodic evaluation of plant managers based on their progress toward reducing hazardous chemical use.
- A major cooperative effort between Conservation Law Foundation and several New England electric utilities to reduce demand for electrical energy by such means as installing free energy-saving fluorescent light bulbs in residential customers' homes.
- Tufts University's initiative to promote "environmental literacy"

## Massachusetts *from page 3*

models (as alternatives to the current single-media organizational model) in carrying out the Bureau's mandate.

On July 24, 1989, the Massachusetts Toxics Use Reduction Act (TURA) was signed into law with the support of industry, environmentalists, and the Dukakis Administration. To a large extent, TURA gives legislative mandate to the whole facility approach and establishes planning and reporting requirements designed to (a) gather information about the regulated community as a set of whole facilities; and (b) to require each facility to identify the costs, across all media and throughout the facility, of using toxic materials.

DEP's whole-facility approach, three years in the making, is still by no means complete. Nor is it yet clear whether the whole-facility approach will require fundamental changes in existing structure or statute, rather than just improved procedures and cross-program communications. What is clear is that the best work to date has come from the joint effort of the "visionaries" (including industry and environmental lobbyists and political appointees) working with the experienced "veterans" of daily outreach, permitting, and compliance activities. This has allowed us to use the lessons and experience gained through the one-pipe-at-a-time approach in building the whole-facility approach of the future.

For further information, contact Manik Roy at (617) 292-5982.

by integrating pollution prevention into existing degree programs, including but not limited to the environmental engineering program.

At its second meeting on January 12th, the Council decided to focus its efforts specifically on ground-level ozone. The Council will use pollution prevention principles to address the ozone problem in such a way as to achieve maximum multimedia benefits, to promote individual and collective action, and to conserve and protect natural resources. The Council also began considering specific project proposals on ground-level ozone. For further information, contact Nancy Lewis at (617) 565-3394.

## An Overview of the Massachusetts Toxics Use Reduction Act

The Massachusetts Toxics Use Reduction Act (TURA, M.G.L. c.21 I) was signed into law on July 24, 1989 by Governor Dukakis with the unanimous support of both houses of the state legislature. The law establishes a statewide goal of reducing toxic waste generated by 50% by 1997 using toxics use reduction as the means of meeting this goal, as well as the preferred means for achieving compliance with virtually any environmental law or regulation.

Toxics use reduction is defined in TURA as:

*In-plant changes in production processes or raw materials that reduce, avoid, or eliminate the use of toxic or hazardous substances or generation of hazardous byproducts per unit of product, so as to reduce risks to the health of workers, consumers, or the environment, without shifting risks between workers, consumers, or parts of the environment.*

Toxics use reduction is further defined as being achieved through input substitution, product reformulation, production unit redesign or modification, production unit modernization, and improved operation and maintenance of equipment; it only includes recycling and reuse that is integral to the production process.

The Act mandates the Commonwealth to provide technical assistance to industry, to establish a university-based Toxics Use Reduction Institute, and to develop a "whole facility" approach to its environmental and occupational protection activities. In addition, "Large Quantity Toxics Users" (currently the same firms reporting under SARA 313, but expanding to include other industries and chemicals) are required to inventory the chemicals flowing in and out of each production process at their facilities and, beginning in 1994, to develop a toxics use reduction plan for each such production process, to be certified by "Toxics Use Reduction Planners."

After July 1, 1995, the Administrative Council on Toxics Use Reduction (established by the Act), drawing on several years of data, may designate certain industry groups as Priority User Segments, which will allow DEP to require reporting and planning by previously exempt firms, and to impose performance standards in certain cases.



# States and Regions: Idaho, Michigan

## Idaho's Waste Reduction Assistance Program



Since April 1989, the Idaho Waste Reduction Assistance Program (IWRAP) has been operating out of the Idaho Department of Health and Welfare, Division of Environmental Quality, under an EPA-Idaho Source Reduction and Recycling Technical Assistance (SRRTA) Cooperative Agreement.

IWRAP provides non-regulatory technical assistance to industry and the public as well as educational and promotional materials focusing on source reduction and recycling. One of the first publications produced was "Looking Down the Trash Barrel," which was distributed state-wide. A key figure in IWRAP's educational campaign is its program mascot, a jackrabbit named Jak Wrappit. Under the byline, "Rappin' with Jak Wrappit," IWRAP has a monthly column in the Idaho Fish and Game magazine, *Wildlife Express*, which reaches more than 6,500 4th through 6th graders across the state. An in-state toll-free hotline is staffed by IWRAP as well, providing access to waste reduction and recycling information.

In its first nine months of operation, IWRAP set a goal of bringing office paper recycling to all portions of the state government. Starting first from home base, IWRAP initiated a drive to increase recycling in the Department of Health and Welfare's central offices through a "Recycling Awareness Program" (RAP).

IWRAP conducted a survey of employees' recycling habits at home and work, and then provided the collection containers, training, fact sheets, and promotional posters used in the program. IWRAP is now extending RAP to the legislature and other state offices, and has expanded the program to include recycling of glass, aluminum, and corrugated cardboard.

With only one full-time staff person, IWRAP has helped craft an agreement between the State of Idaho, the City of Boise, and the Boise Ad Federation to develop a three year plan for recycling awareness and promotion in Boise. Efforts in conjunction with the League of Women Voters led to a proclamation by Governor Andrus declaring January 28 through February 3 as Solid Waste Awareness Week in Idaho.

During 1990, IWRAP intends to continue with many of these activities as well as a Consumer Oil Recycling Program and pilot projects in industrial and municipal waste reduction and recycling. IWRAP will provide the first training program to Division of Environmental Quality field staff to recognize industrial waste minimization, source reduction, and recycling opportunities. For further information on IWRAP, contact Kathy Ewert at (208) 334-6664.



Idaho's Jak Wrappit

## Interns to Assist Firms in Michigan

The State of Michigan is using a grant from EPA (Pollution Prevention Incentives for States) to train student interns to assist firms in multi-media source reduction and recycling.

College seniors and graduate students are being recruited from three state universities by the Michigan Office of Waste Reduction Services, a joint office of the Department of Natural Resources and Department of Commerce. The first group of interns will attend a two-day training program in February, then begin assignments at businesses selected for their waste reduction potential and for the appropriateness of students' expertise. (See *Interns' Assignments*.)

EPA's grant of \$240,000 will support the program for three years. The grant pays for the training services of a technical assistance engineer as well as interns' compensation and travel expenses.

The Office of Waste Reduction Services hopes to assist about 30 businesses during the term of the EPA grant. Businesses targeted for future internships include automobile assembly, painting and coating, and screw machine products companies.

The two-day training program, conducted at the University of Michigan College of Civil Engineering, imparts the philosophy and techniques of source reduction as well as basic organizational skills. The program includes a discussion of EPA's pollution prevention policy and a screening of the video *Less is More*.

As they work on their projects, interns can obtain coaching both from Waste Reduction Services staff and from faculty members at the three universities where students are being recruited: the University of Michigan, Michigan State University, and Michigan Technological University.

Interns are asked to keep a daily log of their activities and to report their progress at least every two weeks to the Waste Reduction Services staff. In some cases, the interns will implement source reduction and recycling recommendations which were previously identified by staff of the Office of Waste Reduction Services. In other cases, the interns themselves will be responsible for identifying opportunities as well as implementing source reduction or recycling strategies.

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## Interns' Assignments

<u>Business</u>	<u>Project</u>
Electroplater	Identify wastewater reduction options
Multi-plant chemical manufacturer	Establish multi-facility trash recycling program
Chemical manufacturer	Analyze waste stream and identify reduction options
Foundry	Waste audit
County recycler	Establish county-wide reduction program
Auto parts manufacturer	Waste audit



# Calendar of Events

Title	Sponsor	Dates	Contact
Hazmat/Central '90	Hazmat World	March 13-15 Rosemont, IL	Mary Jo McGuire 708-469-3373
Globe '90-Global Opportunities for Business & the Environment	Government of Canada; Major Event Management, Inc.	March 19-23 Vancouver, BC	Katie Rodgers 604-681-6126
Prevention, Management & Compliance for Hazardous Wastes (Course)	American Institute of Chemical Engineers (AIChE)	March 21-23 Orlando, FL	Registrar 212-705-7526
1st Annual Recycling Conference	N.Y. State Department of Environmental Conservation	March 22-23 Liverpool, NY	Debbie Jackson 518-457-7337
Seminar on Plastics Recycling	Center for Plastics Recycling Research (Rutgers)	March 22-23 Piscataway, NJ	Catharine Kasziba 201-932-4402
Hazardous & Solid Waste Minimization Course	Government Institute Inc.	March 29-30 Arlington, VA	Sheila Coffman 301-251-9250
EarthTech 90: Technology Fair and International Forum	Environmental and Energy Study Institute	April 4-8 Washington, DC	Nisha Desai 202-289-0800
8th Annual Virginia Waste Management Conference	Government Refuse Collection & Disposal Association	April 24-25 Richmond, VA	Linier Hickman 800-456-4723
Waste Exposition '90	National Solid Waste Management Association	May 2-4 Atlanta, GA	Registrar 202-659-4613
Hazwaste Expo Atlanta '90	National Association of Hazardous Waste Generators	May 7-9 Atlanta, GA	Robert McCarty 215-683-5098
Haztech International '90	Institute for International Research: American Chemical Society	May 8-10 Houston, TX	Benjamin Deutsch 212-826-3340
5th Annual Aerospace Haz. Waste Minimization Conference	Hughes Aircraft Company	May 22-24 Costa Mesa, CA	Alex Sapre 213-568-6365
14th Biennial National Waste Processing Conference/Exposition	American Society of Mechanical Engineers	June 3-6 Long Beach, CA	Leslie Friedman 212-705-7788
HazMat International '90	Hazmat World	June 5-7 Atlantic City, NJ	John Frett 312-469-3373
Int'l Conference on Pollution Prevention: Clean Technologies & Clean Products	EPA International Association for Clean Technology	June 10-13 Washington, DC	Mary Bourassa 703-734-3198
1st U.S. Conference on Municipal Solid Waste Management	U.S. EPA	June 13-16 Washington, D.C.	GRCDA 800-456-4723
9th Annual New England Resource Recovery Conf/Expo	New Hampshire Resource Recovery Assn., Assn. of Vermont Recyclers	June 13-15 Burlington, VT	NHRRRA 603-224-6996
Hazwaste '90 Expo	National Association of Hazardous Waste Generators	June 18-21 San Diego, CA	Ken Sellinger 415-726-3823



## Interview

# Jerry Kotas, Director of EPA's Pollution Prevention Office



**PPN:** *How would you assess this past year of activity on the part of the Pollution Prevention Office and EPA as a whole?*

**JK:** In a word, remarkable! With fewer than 15 people, our staff have accomplished more in one year than could possibly have been expected. We now have an active state grants program as well as pollution prevention staff in every EPA region. Our outreach efforts are reaching a wide audience, and we are seeing more and more companies and industry associations come on board. We are also pleased with the progress being made internally within EPA in incorporating pollution prevention into the strategy of every office and program. This is a slow process, but I am optimistic that a prevention perspective will soon start to be felt in many of EPA's ongoing programs—permitting, inspections, and training, as examples. The more sources that promote prevention, the more engrained the concept will become.

**PPN:** *When we interviewed you last February, you stated that cooperative efforts with industry held enormous potential and that you were not contemplating writing regulations to achieve waste reduction targets. Is that still the case?*

**JK:** Yes and no. We still see evidence that there is much more that can be accomplished through cooperative efforts with industry. We are challenging

industry to "pick up the ball" in prevention and move forward aggressively as leaders rather than as followers. I think that industry executives can read the handwriting on the wall—they know that mere compliance with federal and state standards will not position their companies competitively for the 1990s. Just look, for example, at the market power potential, in Europe and here as well, of products labeled "environmentally friendly." Clean products and clean technologies represent market opportunities.

We are also challenging industry to go beyond simple recycling programs in their offices or good housekeeping efforts in their plants. The challenge is for industry to take the leadership in instituting comprehensive waste prevention programs in their firms and in the communities where they are located. There are innumerable opportunities for using fewer and less toxic chemicals, for conserving energy and other resources, and for devising sound solutions to the community's waste disposal problems.

**PPN:** *How realistic is it to expect that industry will pick up this sort of challenge voluntarily?*

**JK:** Good question! Clearly, there are incentives—some of which go beyond short-term profits—to industry to become community leaders in this area. On the other hand, different firms and sectors face very different financial and technological constraints. We recognize that at some point down the road, achieving the level of environmental gains that are necessary will not save industry money the way early prevention actions did—instead, they may cost industry money. But that is because, at present, individual firms do not fully bear the costs of their polluting behavior or their use of resources. One of the things that must happen in the future is a realignment of the prices that industry pays for using or polluting natural resources (like water, air, land, or forests) so that the prices are more in accord with the full value that society places on these resources. The result may be a painful shift in costs for industry, but ultimately, it will create the proper incentives to re-

duce resource use and waste.

To finish answering the earlier question, EPA will attempt to strike a balance between voluntary and involuntary approaches. One thing we are studying is the possibility of using incentives, rather than traditional end-of-pipe regulations, to accomplish our goals. Of course there also must be continued strong enforcement of existing regulations, and we expect to see more use made of existing legal authorities such as the Toxic Substances Control Act to accelerate the phase-out or ban of particularly toxic and ubiquitous chemicals.

**PPN:** *What are you particularly excited about in the pollution prevention field in the coming year or two?*

**JK:** One of the most exciting areas is the work we are doing on demonstration projects. We will be developing several comprehensive, environmentally friendly locales—a small urban community, a federal facility, a university setting—that can serve as models for a wider audience on how decisions about economics and environment can be integrated on a day-to-day basis.

We also intend to begin focusing attention on selected targets that present high environmental risks and that also have a high potential for benefiting from a preventive approach—for example, pollutants such as heavy metals and solvents, as well as particular industries where a preventive, multimedia perspective is long overdue. Beyond that, the next few years will be important in widening the pollution prevention effort to encompass all of society. Just as pollution is not limited to industrial behavior or industrial pollutants, neither is prevention. Earth Day 1990 is setting an important example in this regard. All sectors of society must stay involved—energy, agriculture, transportation, consumers, states, local governments, public interest groups, research and educational institutions, everyone! There are significant opportunities for prevention in each of these areas. Ultimately, consensus is needed on a national policy that sets realistic goals to move pollution prevention forward in each sector.



# EPA Proposes 25% Materials Separation in Municipal Waste Combustor Rule

On December 20, 1989, EPA issued a proposed rule limiting air emissions from municipal waste combustors (MWCs) (54 *Federal Register* 52251). Developed by the Office of Air and Radiation, the rule sets emission standards for MWC organics, metals, acid gases, and nitrogen oxides based on the "best demonstrated technology" that can be achieved, taking into account costs, energy requirements, and other health and environmental impacts. Within 5 years, the standards would achieve a reduction of 90% in dioxins/furans and acid gas emissions from MWCs; a 99% reduction in metal emissions except mercury; and a 40% reduction in NO<sub>x</sub> emissions.

In line with the nationwide 25% reduction/recycling of solid waste called for by EPA's Agenda for Action, the proposed MWC standards also would require all MWCs to separate a minimum of 25% of municipal solid waste (by weight) for recovery prior to combustion. Recoverable materials include paper and paperboard, ferrous metals including household appliances, nonferrous metals, glass, plastics, household batteries, and yard wastes.

Of the 25% waste to be separated, EPA will allow a maximum of 10% for yard waste separation, and MWCs would be prohibited from combusting wet lead-acid vehicle batteries weighing more than 11 pounds. In addition, MWCs would be required to de-

velop a program to remove household batteries prior to combustion. A variety of methods could be used to meet the materials separation requirements, including on-site mechanical or manual separation, a community source reduction or recycling program, or a combination of approaches. MWCs must have a materials separation plan ready for implementation by December 31, 1992 or at initial start-up, whichever is later.

EPA believes that materials separation will result in further reductions of emissions from MWCs, as well as improving the combustion efficiency of MWCs by removing noncombustibles such as metals, glass, and water-saturated yard wastes from the waste stream. Processing of solid waste prior to combustion also will produce benefits associated with reduced quantities of ash to be landfilled and reduced levels of toxic materials in the ash. Finally, the long-term viability of markets for recovered materials will be enhanced by a stable supply of recovered materials.

In developing the materials separation proposal, EPA contacted members of the MWC industry, state and local governments, and the environmental community. Numerous issues were considered, and EPA is continuing to work closely with interested members of the public. EPA is specifically seeking comments on the provisions relating to batteries; whether 25% is the appropri-

ate target figure (other suggestions ranged from 15% to 40%); whether a higher level of materials separation should be phased in after 1992; and whether specific separation targets should be set for the list of recoverable materials. Comments also are specifically requested on how to structure MWC plans for off-site or community programs, how to determine compliance with such programs, and how to give credit for community source reduction programs and backyard composting of yard waste.

Comments on the proposed rule must be submitted before March 1, 1990 to Air Docket (LE-131), Attention Docket No. A-89-06, Room M1500, U.S. EPA, 401 M Street SW, Washington, D.C. 20460. For further information, contact Walter Stevenson at (919) 541-5264.

## Michigan

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Upon completing a project, each intern will be asked to submit a detailed report. The report is to discuss the company's process and waste stream, options for waste reduction or recycling that may have been evaluated, and steps that were taken to implement the selected option.

Facility managers will receive copies of the reports and, with their approval, Waste Reduction Services will offer copies to other Michigan facilities.

*For additional information:* Call or write to Myra Grant, Education and Outreach Coordinator, Office of Waste Reduction Services, Departments of Commerce and Natural Resources, P.O. Box 30004, Lansing, MI 48909, 517-335-1178.

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Penalty for Private Use \$300