



# Pollution Prevention News

## Inside:

- 2 In the News
- 3 Corporate Habitat Preserves
- 4 Recycling Wastewater
- 5 Recycling Award Winners
- 6 Focus: TCA
- 7 AIPP Officers Elected
- 8 Calendar

To be added to our mailing  
list, please write:  
Pollution Prevention News  
U.S. EPA  
401 M Street SW (PM-222B)  
Washington, DC 20460

Editorial Staff:  
Priscilla Flattery, *Editor*  
Gilah Langner  
Suzanne Harris  
Judith Rosenthal

## 1989 TRI Data Released

### *Pollution Prevention Reporting to Take Effect Next Year*

Initial results of the 1989 Toxics Release Inventory (TRI) indicate that 22,560 industrial facilities released 5.7 billion pounds of toxic chemicals into the nation's environment. From 1987 to 1989, reported releases and transfers of all TRI chemicals decreased by 1.3 billion pounds (18 percent). EPA Administrator William Reilly noted that TRI "is fast becoming one of the most powerful tools we have to reduce toxic emissions. For many companies the TRI data can provide an impetus to consider changes in the mix of materials and processes during manufacturing. The opportunities are there to cut toxic emissions sharply — they can be economical and help ease liability and regulatory demands."

Although some of the decreases between

1987 and 1989 may be attributable to facilities' faulty estimates of 1987 and 1988 releases, evidence suggests that some real decreases occurred as well. For one thing, there was a 15% increase in facilities reporting in 1989 compared with 1987. In addition, industrial production by the majority of industries required to submit reports increased between 2 and 9 percent over the two-year period. With continuing additions and deletions to the chemicals for which reporting is required, and with a statutorily mandated decrease in the reporting threshold (from 75,000 pounds for 1987 to 25,000 pounds in 1989), year-to-year comparisons of the TRI data are difficult. EPA will report on its analyses of the data in a National Report

*Continued on page 7*

## EPA Issues MWPP Guidance

### *Pollution Prevention Considered Essential for POTW Viability*

EPA has embarked on a cooperative effort in partnership with the states to promote state-based municipal water pollution prevention (MWPP) programs. The program focuses on maintaining compliance at publicly owned treatment works (POTWs) and encourages measures such as toxicity reductions at the source, resource conservation to reduce water and energy use, appropriate pricing, BOD reductions, recycling, and beneficial uses of sludge. States will have the flexibility to determine whether and how to implement MWPP programs.

POTWs not only discharge wastewater, but may contribute to the release of various air emissions and solid wastestreams as a result of their activities and the activities of

their indirect dischargers. In the last 20 years over \$73 billion in federal, state, and local funds has been invested in the construction of municipal wastewater treatment facilities.

As the federal role in funding construction grants ends, prevention is seen as the best means of ensuring the continued viability of this investment and reducing the need for substantial new capital. Under current approaches, EPA estimates that another \$80 billion would be needed over the next 20 years to keep pace with population pressures and deteriorating systems.

EPA's guidance document on MWPP programs encourages states to conduct regular assessments of the operations and

*Continued on page 7*

## In the News

### NAS Recommends Actions to Reduce, but Prepare for, Global Warming

In spite of uncertainties in the science of global climate change, the U.S. should continue aggressive phaseout of CFCs, introduce regulations to foster energy conservation and efficiency, do more research on non-fossil energy sources, and consider restructuring energy prices to more accurately reflect environmental costs, according to an EPA-sponsored report from a committee panel of the National Academy of Sciences. The panel estimated that following its recommendations would cut U.S. emissions of greenhouse gases 10 to 40% from current levels.

The panel, appointed by the Academy's Committee on Science, Engineering and Public Policy, also recommended agricultural research, water-pricing policies that encourage

efficiency, and better management of the nation's water supply to prepare the U.S. for a possible rise of 2 to 9 degrees F. in average global temperature by 2050. Such measures would serve as relatively inexpensive "insurance protection against the great uncertainties," the report said.

The panel's energy conservation recommendations included tax incentives or regulation to achieve a 30 percent increase in auto fuel efficiency, more efficient motors for industry, and tougher standards for refrigerators and other appliances.

Copies of the report, *Policy Implications of Greenhouse Warming*, are available from the National Academy Press, 2101 Constitution Ave., Washington, D.C. 20418, (202) 334-3313 or (800) 624-6242.

### Update on Green Lights

EPA's innovative Green Lights program is spreading the word on energy savings through new lighting technologies, with some 150 companies participating in various capacities. The program now includes "Allies" as well as "Partners." Allies are companies affiliated with the program that manufacture energy-saving lighting equipment or that offer lighting management services such as surveys, audits, installation, upgrades, and maintenance. There is also an ally category for electric utilities. Partners are companies that voluntarily commit to selecting lighting options (including retrofitting) for their U.S. facilities that will maximize energy savings while offering comparable costs and lighting quality.

As of May 16, 1991, the energy-savings program included 59 partners, 53 manufacturer allies, 35 lighting management company allies, and 3 utility allies. New partners that have come on board since last reported on (in March *PPN*) are: Abbott Laboratories, American Express Company, Atlantic Richfield, Automatic Data Processing, Baxter Healthcare Corporation, Bellcore, Chevron, Continental Insurance, Duracell U.S.A., First

Data Resources, First Wachovia Corporation, Hoechst Celanese, Kerr-McGee Corporation, Fred Meyer, Inc., Herman Miller, Inc., National Service Industries, Nike, Phillips Petroleum, Polaroid, Joseph E. Seagram and Sons, Inc., SAIC, Stamats Communications, Supermarkets General Corporation, Texaco, Thrift Drug Company, Univ. Corp. for Atmospheric Research, U.S. Bancorp, USF&G, W.W. Grainger, Waste Management, Inc., Whirlpool, and Yellow Freight System, Inc.

Green Lights will be holding a regional recruiting conference in Atlanta on July 10; between 100 and 200 potential partners will be invited from the Southeast region. Over 300 attendees gathered in Portland, OR for the first Green Lights regional conference on May 15th.

In addition to active recruitment of new partners and allies, the Green Lights program is developing and refining software to support costing and decision-making for lighting options. Fact sheets, a slide show, and an economic forecasting report are being readied as well. For more information on the program, please contact EPA at 202-479-6936.

### New Executive Order Promotes Energy Savings

President Bush has signed into effect an Executive Order that directs all federal agencies to reduce their energy use by at least 20 percent by the year 2000 in federal buildings and facilities, from 1985 levels. The order requires agencies operating fleets of 300 or more vehicles to reduce gasoline and diesel fuel consumption by at least 10 percent by 1995 from 1991 levels. Additional requirements encourage federal agencies to acquire alternative fuel vehicles and to incorporate life-cycle costing methods in all their procurement decisions.

#### Video on Energy Efficiency

A recently released video entitled *Negawatts* describes how corporations can join in the energy-efficiency revolution and increase both profits and productivity. Produced by EPA's Pollution Prevention Office and the Rocky Mountain Institute, the video covers energy efficiencies in lighting, motors and controls, windows, and insulation. The 20-minute video is available for \$20 from the Rocky Mountain Institute, 1739 Snowmass Creek Road, Snowmass, CO 81654-9199. Tel: 303-927-3851. Fax: 303-927-4178.

#### Environment and Industry Digest

is a monthly newsletter from the United Kingdom that covers the technology of environmental protection. The newsletter is aimed at the technical manager level and addresses a broad range of industries, including power generation, manufacturing, water and sewerage, and the chemical and process industries. For a free sample copy, write to John P. O'Hara, Editor, Environment & Industry Digest, 4 Kings Meadow, Ferry Hinksey Road, Oxford, OX2 0DU, United Kingdom.

## Corporate News

### Registry Honors Companies That Nurture Wildlife

Ten corporations that created wildlife habitats on company property have been recognized for their efforts in a new international registry created by the Wildlife Habitat Enhancement Council (WHEC). The ten companies — Amoco, Browning-Ferris Industries, Delmarva Power and Light, Dow, DuPont, Duquesne Light, Homestake Mining, Monsanto, Texaco, and Vulcan Materials — have set aside 18 wildlife preservation sites ranging from less than an acre to 7,500 acres. To be included in the new registry as a "certified corporate wildlife habitat," a site must have a formal management plan and must provide adequate food, water, cover and living space to meet its conservation objectives.

WHEC is a non-profit organization started by environmental and corporate groups to promote wildlife habitats on private lands. In its three years of existence, WHEC has helped companies develop 106 conservation projects across the U.S.

One of the registry's spectacular examples of corporate wildlife management is the Homestake Mining Company's site in Lower Lake, California, about 80 miles northeast of San Francisco. There, an endangered species called the Townsend's big-eared bat had been driven from its cave habitats by suburban expansion, and had taken to roosting in abandoned mine tunnels. When Homestake decided to reopen some mines, the bats were in danger of being driven from their last available habitats. With the help of a biologist from the University of California at Berkeley, Homestake's people successfully guided the colony to a tunnel that the company had prepared for the bats, protected from human disturbance. In the first year, the colony almost doubled in size, and the project is being expanded, says environmental manager Ray Krauss.

The Vulcan Materials Company, for years the world's largest producer of commercial crushed stone, "wanted to use idle buffer areas around the Sanders Quarry (Warrenton, Va.) to enhance the wildlife," explains manager Alex Glover.



*Bats are very susceptible to human disturbance, and sometimes abandon their young forever if a human just enters their cave. Homestake erected a "bat gate" that allows bats to go in and out but keeps people out. To get the bats to move habitats with a minimum of human interference, they sealed off the old roost while the bats were hibernating elsewhere, prepared the new roost with the bat gate, and hoped the bats would start using the new one when they found the old one sealed. It worked!*

The company improved the habitat for wild turkey and eastern bluebirds, and now "we win, our neighbors win and wildlife wins," Glover says. As word of

their success spreads, says Glover, "we get calls from other companies who want to start the same thing." For more information, contact WHEC at 301-588-4629.

Merlin D. Tuttle, Bat Conservation International

### Corporate Notes

More than 16 million pounds of trash a year will be converted into reusable materials through a national recycling program launched by **Red Lobster**. The company has been testing its recycling program for about eight months in selected markets and now expects to implement the program at the nearly 500 Red Lobster U.S.A. also recently stopped using paper napkins, napkin rings, and paper placemats at its restaurants, in favor of linen napkins. The company estimates that this move alone eliminates 4.7 million pounds of paper from the wastestream each year and saves about 40,000 trees from being harvested.

**McDonald's Corporation** and the Environmental Defense Fund have announced a number of measures designed to reduce by up to 80 percent the amount of solid waste generated by McDonald's. Measures include replacing bleached paper bags with brown ones, reducing the size of napkins, offering reusable coffee mugs, and providing condiments in bulk dispensers. Eliminating throwaway products used by McDonald's customers will eliminate about 5 percent of the waste produced; recycling will account for the remaining savings. The measures are expected to reduce the trash generated at the company's 8,500 outlets by up to 1.6 million pounds a day.

# Wastewater Recycling

## The Second Time Around: Municipalities and Industry Find a Valuable Resource in Reclaimed Water

**M**unicipalities throughout the country are thinking about water in a new way. For many applications, recycled wastewater is proving to be a safe, cost-effective alternative to potable (drinkable) water.

Reclaimed wastewater is being used to landscape golf courses and median strips, to irrigate cotton fields and other non-food croplands, and to replenish marshes and wetlands. In industry, a wide range of cooling and other needs are being met by wastewater.

Municipal wastewater has been reused on a limited basis since the 1940s, but reuse has grown more popular over the past decade, driven by the high cost of developing new sources of clean water. In the Southwest and Southeast, in particular, population pressures — in some areas, combined with drought — are strong incentives to conserve potable water supplies.

Increasingly stringent regulation of effluent discharges to water is a further motivation. Municipalities and large industrial waste-generators often find it less costly to recycle water than to invest in pollution abatement equipment.

### Public Perceptions Favorable

Most municipalities find that public perceptions of wastewater reuse are

favorable, so long as the reuse project is required to meet water conservation goals and can be shown to be cost-effective.

In **St. Petersburg, Florida**, the population has grown by 10 percent since 1976 with no increase in potable water usage. St. Petersburg has the largest urban reuse program in the U.S., with a dual distribution system (separate pipes for potable and recycled water) that sends recycled water to over 250 commercial and industrial customers and over 5,000 residential customers. Reclaimed water is used to irrigate all of the city's major parks and median strip areas, plus commercial and light industrial sites.

The Florida Department of Environmental Regulation has identified some **200 reuse projects in Florida** in 1990. These projects used about 320 million gallons per day of reclaimed water for a wide range of beneficial uses.

In **Orange County** in southern California, the Irvine Ranch Water District reclaims about 11,000 to 13,000 acre-feet of water per year for landscape and agricultural irrigation. About 25 percent of all water used in Irvine is non-potable water produced by its reclamation plant. The reclamation was undertaken to minimize imports from north-

ern California and Colorado and to reduce discharges to streams or the Pacific Ocean. In a future phase, the project will supply reclaimed water to high-rise buildings for use in toilet flushing.

In 1975, the **Orange County Water District** began operating a water reclamation facility capable of reclaiming 15 million gallons per day of secondary effluent and injecting it into the coastal aquifer to prevent seawater

*continued on page 5*

### When Does Water Reuse Pay?

By J. Gordon Milliken

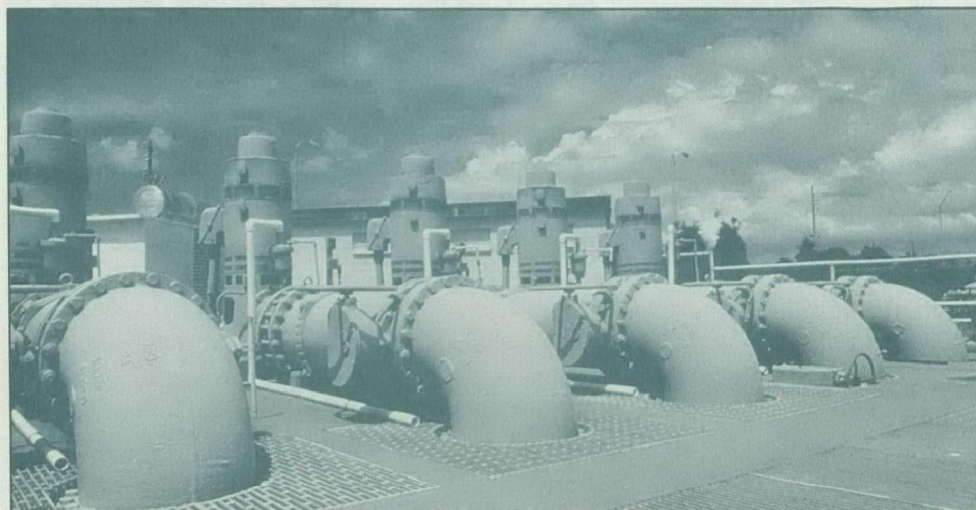
As cities grow and exhaust their traditional water supply sources, they must seek alternative supplies, usually by diverting water from ever more distant streams or by buying agricultural water for municipal reuse.

The costs of obtaining water by diversion from rivers or lakes some distance away are becoming quite high, and the political process can be extremely difficult. Today, the annual cost per acre foot is growing much more rapidly for conventional water supply than for recycled water.

So if a municipality is able to develop a recycling plant which will result in an annual cost per acre foot — including amortized capital cost — not greater than about 1.25 times the cost of conventional water, the municipality should give the project serious consideration.

In a few years, the cost of new water will be growing even faster relative to the cost of recycled water.

*J. Gordon Milliken is an economist with Milliken Research Group, Inc. in Littleton, Colorado.*



St. Petersburg, FL: Pump stations deliver reclaimed water to the dual distribution system for urban irrigation and deep injection wells.

# Wastewater Recycling

from page 4

intrusion and recharge the existing potable groundwater basin.

**Tucson, Arizona**, has undertaken a \$63 million, ten-year capital plan to construct a system which will provide approximately 35,000 acre feet per year of reclaimed wastewater. Because irrigation water demands vary as much as 400 percent from winter to summer, reclaimed wastewater is stored in an aquifer for later recovery.

In **Colorado**, Colorado Springs, Aurora, and the Inverness Water and Sanitation District (south of Denver) all use reclaimed wastewater for landscape irrigation. Hawaii's first large-scale wastewater reclamation facility, on **Maui**, provides water for irrigating ranch land and newly landscaped roadways. And these are only a few of the municipal success stories.



*Tucson, AZ: Water is reused to maintain a spring-training baseball diamond.*

## Industrial Uses

In industry, leading recyclers include oil refiners, power generators, steel manufacturers, paper and pulp mills, metal platers and other processing facilities that require millions of gallons of water per day for washing, quenching and boiler water makeup.

For example, in **Tampa, Florida**, an

incinerator uses one million gallons per day of reclaimed wastewater for cooling water. The R.D. Nixon Power Plant, a coal-fired, steam/electric plant near **Colorado Springs**, recovers and recycles power plant cooling-water effluent, attaining zero wastewater discharge. The **Palo Verde Nuclear Generating Station** 55 miles west of Phoenix uses effluent from a nearby wastewater treatment plant as well as from the city of Tolleson, Arizona.

According to the Water Pollution Control Federation, water recycling by the steam electric and manufacturing industries is likely to increase by approximately one-fifth by the year 2000, with corresponding decreases in wastewater discharges.

*These articles are based on a series published from Oct. '90 to Jan. '91 in the magazine of the Water Pollution Control Federation, Water Environment and Technology.*

*Photos courtesy of CH2M Hill.*

## Potable Reuse: the Frontier

One of several projects under way to develop safe potable water from treated wastewater:

"The Denver Water Department is operating a one million gallon per day demonstration plant that produces potable water from secondary treatment plant effluent. The need for the project grew out of the recognition that additional conventional sources, if available, might cost \$5,000 per acre foot to develop by the year 2000, and industrial reuse of wastewater would not substantially reduce water demands. The construction of the demonstration plant is part of a \$35 million, 7-year project by the department to demonstrate that high-quality water, equal to or better than Denver's current drinking water, can be produced safely and reliably from treated wastewater treatment plant effluent. EPA is also participating in this demonstration project by contributing approximately \$7 million of the total cost."

—From Water Environment and Technology.

## EPA Recognizes Recycling Achievements

EPA Administrator William Reilly has announced the first winners in EPA's national environmental awards program. This year's awards are dedicated to achievements in municipal solid waste management through recycling. Nine national awards were made, in the following categories:

- **Citizens:** **Bob Kerlinger**, for founding and coordinating the Poquoson Recycling Center, Poquoson, VA, which uses volunteer groups and is already recycling 13 percent of the city's trash.
- **Community, Civic, and Non-Profit:** **Seattle Tilt's Community Composting Education Program** in Seattle, WA, for training more than 100 backyard composting experts and providing community education about composting.
- **Educational Institutions, K-12:** **Aurora Public Schools**, Aurora, CO for its *Municipal Solid Waste Management Teacher's Guide*.
- **Colleges and Universities:** **University of Wisconsin at Stevens Point** for its comprehensive 3R (recycling, reuse, and reduction) program involving both students and university management.
- **Small Business:** **eegee's, Inc.** of

Tucson, AZ for its internal recycling program, now being extended to other Tucson businesses.

- **Large Business:** **Fort Howard Corporation**, Green Bay WI for its National Recycling Advocacy Program.
- **Local Government:** **City of Newark**, NJ, for innovative programs (including deputizing local youth as special assistants to the Mayor and required recycling of ozone-depleting compounds) leading to one of the highest recycling rates in the nation.
- **State Agencies:** **State of Rhode Island** for a comprehensive recycling program which has decreased commercial waste at landfills 24% since 1989.
- **Federal Agencies:** **U.S. Naval Submarine Base, Bangor, WA** for a base-wide recycling program and its extension to local communities and other military bases.

A special award in environmental education went to **HDR Engineering, White Plains, NY** for sponsoring an education program aimed at preschoolers, in cooperation with the children's television show, "Mr. Roger's Neighborhood." For more information, contact Carol Singer, 202-382-4454.

## Focus: TCA

### Case Study: Evaluating a TCA Substitute

EPA's Pollution Prevention Research Branch in the Office of Research and Development along with APS Materials, Inc. (APS), a small metal finishing company in Dayton, Ohio, participated in a joint research project to evaluate the substitution of a dilute, terpene-based cleaner for 1,1,1-trichloroethane (TCA) and methanol in the company's degreasing operations. TCA is used as a cold solvent degreasing agent in many industrial degreasing processes. APS generates TCA and methanol waste from its plasma spray deposition process operations. Waste TCA and methanol were being generated at the rate of 1/2 barrels per month each. Disposal of these solvents had become increasingly difficult.

#### Background

APS plasma sprays parts for aircraft engines, orthopedic implants, and other applications. In its biomedical parts division, APS primarily coats cobalt/molybdenum parts and titanium parts with a titanium alloy. To achieve a strong, adhesive coating, the cobalt/molybdenum parts and titanium parts were cleaned with TCA and methanol respectively. After first passing through a series of preparatory steps, the parts were then placed in an ultrasonic bath containing warm water for 15 minutes. Contaminants from previous cleaning steps were removed in this cleaning process. The parts then continued on through the finishing process.

#### Technical analysis

The focal point of the project was to replace TCA and methanol with the dilute terpene-based cleaner. To accomplish this, some equipment modifications were made. A heater was added to the old ultrasound bath. A deionized water system was purchased along with a stainless steel bath and immersion heater. A heat gun was purchased to quicken the drying process. Other than these equipment additions, the cleaning procedure remained unchanged.

The purpose of the sampling and

analysis project at APS was to support a qualitative judgment of the cleaning capabilities of the substitute cleaning solution. The sampling and analysis protocol was set up in three phases. The first two phases investigated the proficiency of the cleaning solvents. Analyses revealed that the dilute limonene solution adequately removed contaminants and no residual limonene was detected on the parts.

The third phase of the analysis examined the quality of the coating bond for parts cleaned with the terpene-based solution. The before and after tensile strength results were comparable. Overall, the bonding strengths were actually slightly better for the dilute limonene cleaner.

#### Cost Analysis

Although the new cleaning system used the same cleaning method, some capital expenditures were needed to alter the process. Capital cost included purchase of the ultrasound with heater, 5 gal. stainless steel rinse vessel, immersion heater, heat gun, and installation of a deionized water system. The capital cost totalled \$1,793. The net annual cost savings for the project was \$4,800 per year with a payback period of 4.5 months.

#### Summary

In summary, a terpene-based cleaner can adequately clean metal parts without adversely affecting the performance of the plasma-arc coating application. APS has deployed the water-based cleaner in all operations where specifications do not dictate the use of TCA or methanol. APS is also currently performing studies to determine the optimal life of the cleaner in order to minimize cleaner use. Elimination of the disposal problems, maintenance of plasma-arc coating quality, annual cost savings and the short payback period make the use of terpene-based cleaners attractive to other metal cleaning/coating operations.

The full report entitled "Chemical Substitution for 1,1,1-Trichloroethane

and Methanol in an Industrial Cleaning Operation," by Lisa Brown and Johnny Springer of EPA and Matthew Bower of APS Materials, Inc. is available from: EPA/RREL, Pollution Prevention Research Branch, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268.

### Region 8 Partnership Targets TCA Reductions

SolvNet is the initial project of the Region 8 Pollution Prevention Partnership, a cooperative organization comprised of EPA, the Colorado Department of Health, Coors, Martin Marietta, Hewlett Packard, Public Service of Colorado, Colorado Public Interest Research Group, and League of Women Voters. The project has targeted TCA (1,1,1-trichloroethane), an ozone-depleting chemical which is widely used as an industrial cleaner and can also be found in many household products, such as typewriter correction fluid and some automotive spray cleaners.

The four corporate Partners have agreed to cut their combined use of TCA by at least 70 percent by 1992, based on an approximate 1.16 million pounds usage in 1988. The group is sponsoring environmental assessments at two medium-size companies and held an executive luncheon in May to present the benefits of pollution prevention to other CEOs in Colorado.

In addition, Public Service will include in its billings to over 1 million residents, an information brochure on solvent reduction in the home and business. SolvNet is due to run through January 1992; the Partnership will select a new project over the next few months. For more information, contact David Wann at EPA, 303-293-1621.

# EPA News

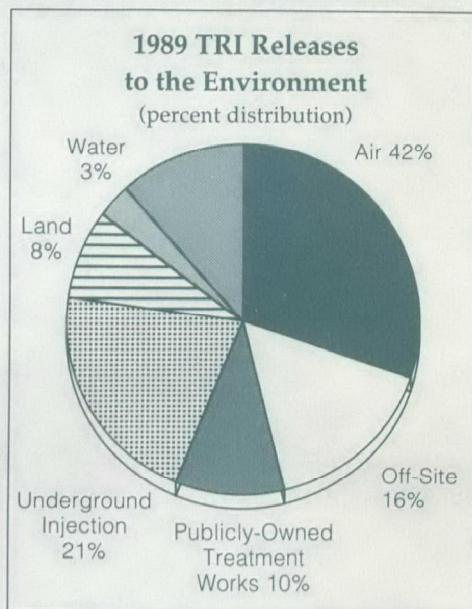
## 1989 TRI Data

from page 1

to be released this summer.

The Toxics Release Inventory is required by law under the 1986 Emergency Planning and Community Right-to-Know Act. Facilities covered by section 313 of the law are required to submit annually a report to their state and to EPA listing their releases of any of more than 300 chemicals and 20 chemical categories into the air, water, or land.

The 1989 data show similar trends in distribution of releases across air, water, and land to previous years (see box). Again, Texas and Louisiana reported the highest levels of toxic releases and transfers (793 and 474 million pounds, respectively), although Louisiana's total reported releases and transfers dropped 38 percent between 1988 and 1989. Five other states (Ohio, Tennessee, Indiana, Illinois, and Michigan) reported over 200 million pounds of releases. The top 10 chemicals reported to TRI, in order of magnitude, were: ammonium sulfate (solution), hydrochloric acid, methanol, ammonia, toluene, sulfuric acid, acetone,



xylenes, 1,1,1-trichloroethane, and zinc compounds.

About 1.3 billion pounds, or 23% of all TRI releases and transfers, are from the 17 chemicals targeted by EPA's 33/50 Program for which the Agency will be seeking substantial voluntary reductions over the next few years.

### What's Ahead

Next year's TRI data should be even

more valuable in measuring progress towards pollution prevention. The Pollution Prevention Act of 1990 requires eight new types of data to be reported on the TRI reporting form, beginning with the 1991 reports (due in July 1992). The new information includes: changes in and projections for future waste reduction, recycling and treatment; and information on source reduction practices used; techniques used to identify source reduction opportunities; a production index; and amounts of chemicals released in one-time events not associated with routine production processes.

In addition, EPA has added nine chemicals to the list because of cancer and chronic toxicity concerns; they will be subject to reporting for the 1990 reporting year. Another seven ozone-depleting compounds (CFCs and halons) will be subject to reporting for the 1991 reporting year.

TRI data for 1989 will be available to the public in June through a national computer database and this summer through a variety of electronic and hard copy formats. Contact the EPCRA hotline, 1-800-535-0202, for more details.

## MWPP Guidance

from page 1

physical capabilities of POTWs; monitor a series of early warning indicators which can identify emerging problems before they occur (e.g., effluent flow versus design flow); hold municipalities accountable for the implementation of necessary preventive measures; and design both technical assistance and enforcement mechanisms to help get preventive programs established.

The guidance document also discusses federal funding sources for state development of MWPP programs. In addition to existing grant programs, EPA's Office of Water and Office of Pollution Prevention plan to enter into cooperative agreements with selected states to provide funding for MWPP pilot programs. For more information on grants programs or to obtain a copy of the guidance, call Valerie Martin, 202-382-7259.

## AIPP Officers Elected

The American Institute for Pollution Prevention (AIPP) elected new officers at its recent meeting in Washington, DC. Dr. Robert B. Pojasek will become Institute Chair on July 1, replacing Dr. Joseph T. Ling who has served as AIPP chair since the Institute's inception in June 1989. Dr. R. Lee Byers is the new Vice Chair.

Dr. Pojasek represents the American Chemical Society on the Institute and is Vice President of the Pollution Prevention Consulting Practice at Geraghty & Miller, Inc., Andover, Massachusetts. Dr. Byers represents The Aluminum Association and serves as Manager, Corporate Environmental Programs, for the Aluminum Company of America, Pittsburgh, Pennsylvania.

Members of the AIPP are specialists in source reduction and recycling and

## Environmental Labeling Conference

An Environmental Shopping and Environmental Labeling Conference will be sponsored by the Pennsylvania Resources Council (Sept. 30) and U.S. EPA Region 3 (Oct. 1-2) in Baltimore, MD. The conference will examine labeling definitions, initiatives, and barriers to a national labeling policy. For information, contact EPA at 215-597-2200 or PRC at 215-565-9131.

were selected by some 22 trade associations and major technical societies to represent them on the Institute. The Institute's mission is to generate broad private and public support for pollution prevention concepts and to assist EPA in achieving widespread and expeditious adoption of these concepts across the United States.

# Calendar

Title	Sponsor	Date/Location	Contact
Coastal and Ocean Management: 7th Symposium	Coastal Zone Fdn., NOAA, others	July 8-12 Long Beach, CA	Orville Magoon 707-987-0114
How to Design a Plastics Recycling Program; Marketing Recyclables & Purchasing Recycled Products	U.S. Conference of Mayors, National Resource Recovery Association	July 10, 11-12 Washington, DC	Ron Musselwhite 202-293-7330
Forum on Integrated Municipal Waste Mngmnt.	ASTSWMO	July 15-17 Las Vegas, NV	Kerry Callahan 202-624-5828
Pollution Prevention: Toward 2000	City of Los Angeles, Local Government Commission	July 31 - Aug. 1 Los Angeles, CA	Debbi Dodson 916-448-1198
29th Annual Intl. Solid Waste Expo	SWANA	Aug. 12-15 Cincinnati, OH	Tel: 301-585-2898 Fax: 301-589-7068
2nd Topical Conference on Pollution Prevention	AIChE Center for Waste Reduction	Aug. 20-21 Pittsburgh, PA	Steve Smith 212-705-7660
Environmental Shopping and Labeling	EPA Region 3, Penn. Resources Council	Sept. 30-Oct. 2 Baltimore, MD	Ruth Becker 215-565-9131
10th National Recycling Congress	National Recycling Coalition	Oct. 21-25 Milwaukee, WI	Margo Kuisis 414-383-0118
Globescope Americas: Charting a Sustainable Future	Global Tomorrow Coalition	Oct. 29-Nov. 2 Miami, FL	John McKain 202-628-4016
Annual Conference	International Solid Waste Management Federation	Oct. 29-Nov. 1 Toronto, Ont.	Kathy O'Neill 301-585-5105
National Environmental Education Conference	U.S. EPA	Nov. 21-22 Washington, DC	Kathy MacKinnon 202-382-4484

United States Environmental  
Protection Agency (PM-222B)  
Washington, DC 20460

FIRST CLASS MAIL  
POSTAGE & FEES PAID  
EPA  
PERMIT NO. G-35

Official Business  
Penalty for Private Use \$300