



Highlights

2 News and Notes

U.S.-Mexico Conference, plus new rules and reports

3 In the Business World

News from industry: metal finishing, aviation, auto painting, and more

6 Green Lights

The program continues to light the way

8 TRI/RTK Conference

Reports on TRI successes from the September TRI/RTK Conference

10 Kyoto Produces Results

11 ABCs of Pollution Prevention

12 Calendar

Read PPN on the Internet!

www.epa.gov/opptintr/ChemLibPPN



United States
Environmental Protection
Agency

Office of Pollution
Prevention and Toxics
Washington, DC 20460

November-December 1997
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Pollution Prevention News

Cleaner Cars Could Be a Reality in 1998

Two of the leading automakers—General Motors Corp. and Ford Motor Co.—have announced that they can start manufacturing a new generation of 99 percent emissions-free “super-clean” cars in 1998. The automakers’ announcements were made in December in support of EPA’s National Low Emission Vehicle Program (NLEV), a joint initiative with the auto industry, 13 northeast states comprising the Ozone Transport Commission (OTC), and non-governmental organizations to make new cars up to 70 percent cleaner than cars currently on the road.

Also in December, EPA issued a rule that finalized regulations for the NLEV Program. The rule outlined the legal framework under which auto manufacturers and Northeastern states can develop voluntary agreements for the production and sale of the new cleaner cars. It is now up to the OTC states and the auto manu-

facturers to determine whether the program can go into effect. If an agreement between the states and auto manufacturers can be reached, Ford and GM have agreed to start producing their new “clean” vehicles in 1998.

The new “clean” cars envisioned by the two auto makers would have conventional internal combustion engines, but would be equipped with advanced catalytic converters and electronic engine control systems to further reduce emissions of hydrocarbons and nitrous oxide. The low-emission cars are designed to reduce smog and would help the United States to meet its targets for reducing emissions of greenhouse gases. Nitrous oxide, one of the tailpipe pollutants that would be almost eliminated in the new vehicles, is one of six gases covered in the Kyoto agreement on global climate change. (See Kyoto highlights on page 10.)

Pollution Prevention Grants Awarded

In October 1997, EPA’s Office of Pollution Prevention and Toxics (OPPT) awarded approximately \$4 million in grants to 50 non-profit organizations under the Environmental Justice through Pollution Prevention (EJP2) program. The program supports local, regional, and national activities to prevent pollution in low income and/or minority communities and to foster cooperative efforts that engage communities, business, industry and government. Projects funded under this year’s program include a diverse collection of educational activities, training programs, restoration projects and collaborative ventures. Information is on the

Internet at: www.epa.gov/opptintr/ejp2/

OPPT also awarded another \$5 million in Pollution Prevention Incentives to States (PPIS) grants to 48 states and one Indian Tribe. The grants are intended to help state and tribal governments sustain existing programs and incorporate pollution prevention into their environmental strategies and service delivery systems. Started in 1989, the PPIS grants program has contributed to the development of a broad range of state and tribal outreach and training programs focused on pollution prevention and providing technical assistance to small and medium-sized businesses.

News & Notes

In Memoriam

This issue of *Pollution Prevention News* is dedicated to the memory of Ernestine Jones-Lewis who served as editor for the last six months.

Ernestine's bright enthusiasm and dedication to her work made her such a pleasure to work with.

We at EPA will sadly miss her ideas and contributions to this publication.

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U.S. - MEXICO CONFERENCE LOOKS TO P2 BEHAVIOR

EPA and Mexico's Federal Attorney for Environmental Protection hosted "Environmental Compliance in North America: A Conference for Key U.S. and Mexican Industry Sectors" on September 25-26 in Washington, D.C. The conference examined current U.S.-Mexican cooperative efforts to enhance environmental compliance and enforcement under the U.S./Mexico Border XXI Environmental Framework and the NAFTA environmental side agreement.

Discussion topics included Mexico's voluntary environmental auditing programs and programs recognizing environmental excellence. Mexico's audit program includes the possibility of assessing and implementing pollution prevention opportunities. Jose Luis Calderon, Mexico's Deputy Federal Attorney for Environmental Protection, challenged U.S. firms operating in Mexico to show leadership by participating in the auditing program. For more information, contact Lawrence Sperling, 202-564-7141.

NEW INFORMATION REQUIRED FROM PESTICIDE MANUFACTURERS

EPA has issued a final rule requiring pesticide manufacturers to disclose more information about unreasonable adverse effects of their products on human health or the environment.

"In addition to information on adverse health effects presently required," explained Lynn Goldman, EPA Assistant Administrator for Prevention, Pesticides and Toxic Substances, "the new reporting rule requires pesticide manufacturers, for the first time, to provide EPA with information about pesticides found in food above approved levels; pesticides detected in surface, ground, and drinking water above safety standards; newly identified types of ingredients which may be of toxicological or environmental concern; specific details about incidents causing adverse effects; and the occurrence of

products no longer effective because of resistance developed by the pests."

Published in the Federal Register on September 19, 1997, the new reporting requirements take effect nine months later. A copy of the Federal Register notice is available on the Internet at www.epa.gov/fedrgstr/epa-pest/1997/sept.

REPORT SHOWS CLEAN AIR ACT BENEFITS OUTWEIGH COSTS 10 TO 1

An EPA report to Congress shows that from 1970 to 1990 the public health protection and environmental benefits of the Clean Air Act (CAA) exceeded the costs of its programs at least ten-fold. Using a sophisticated array of computer models, EPA found that by 1990, if the CAA had not been enacted, 205,000 Americans would have died prematurely, and millions more would have suffered illnesses ranging from mild to severe respiratory problems such as heart disease, chronic bronchitis and asthma attacks. In addition, the lack of controls on the use of leaded gasoline would have resulted in a significant decrease in children's intelligence quotients, and a substantial increase in adult hypertension, heart disease, and stroke.

From 1970 to 1990, EPA estimates that the benefits of CAA programs (including the value of avoiding premature mortality and morbidity) ranged from about \$6 trillion to about \$50 trillion, with an average benefit of about \$22 trillion. By contrast, the actual costs of achieving the pollution reductions over the same 20 year period were estimated at about \$525 billion.

The peer-reviewed report is the first in a series of EPA cost/benefit reports to Congress. The next study, already under development, will estimate the benefits and costs of programs implementing the 1990 CAA Amendments. A summary of the report, "The Benefits and Costs of the Clean Air Act, 1970 to 1990," (October 1997), can be downloaded from the Internet at www.epa.gov/oar/oario.html. For more information, contact Jim DeMocker at 202-260-8980.



In the Business World

Metal Finishing Finishes First

In October 1997, EPA Administrator Carol M. Browner visited a metal finishing facility in Providence, R.I., to announce a milestone agreement for reinventing environmental regulation in the metal finishing industry. The agreement is the first reached by industry, community, and government leaders under the Common Sense Initiative (CSI), EPA's flagship program for developing more flexible industry-by-industry approaches to environmental protection as an alternative to the one-size-fits-all, pollutant-by-pollutant approaches of the past. Browner was joined by U.S. Senators John Chafee (R-R.I.) and Jack Reed (D-R.I.) and U.S. Representatives Patrick Kennedy (D-R.I.) and Robert Weygand (D-R.I.) at the Victory Finishing Technologies, Inc. plant in South Providence.

Under the agreement, known as the Metal Finishing Strategic Goals Program, metal finishers are committing to reduce pollution to levels below what is required by environmental laws nationally. The industry has agreed to several goals, including:

- ▶ Cutting chemical releases, such as volatile organic compounds, by about three-fourths compared to 1992 levels — from more than 8,000 tons to 2,200 tons to air and from about 250 tons to 70 tons for water;
- ▶ Reducing metal releases, such as copper, by about 40 percent — from 60 tons to 36 tons for air and from 173 tons to 104 tons for water;
- ▶ Cutting hazardous sludge, now disposed in the land, by about 40 percent — from 500,000 tons to less than 300,000 tons a year;
- ▶ Cutting energy and water use at participating firms by 50 and 25 percent, respectively; and,
- ▶ Ensuring an 80 percent participation rate by companies within the industry.

Commenting on the three-year process that produced the agreement after nego-

tiations among industry, federal, state and local government officials, environmentalists and community leaders, Browner said, "I commend and thank the metal finishing industry for its leadership in developing this comprehensive program, leading the way for other industries to follow."

Launched by Browner in 1994 as part of the Clinton Administration's reinventing government effort, CSI uses a consensus approach to engage multiple stakeholders in looking at all aspects of an industry's performance. This approach leads to more flexible, cost-effective and environmentally-protective solutions. Moreover, by involving all stakeholders up front, CSI helps avoid challenges in court, ultimately paving the way for faster, cheaper results.

Under today's agreement, EPA will provide top-performing metal finishing facilities with more flexibility within the current regulatory system. State and local governments will provide compliance and pollution prevention assistance, particularly in meeting wastewater pretreatment requirements under the Clean Water Act. Industry trade associations will promote the program and encourage participation among their members while environmental and public interest groups have pledged to publicly recognize participating firms for their environmental performance.

Nationally, the metal finishing industry consists of 3,000 mostly small service businesses and 8,000 "captive" metal finishing operations within larger manufacturing plants. These operations provide protective or decorative metal coatings on a variety of consumer and industrial parts and products — from plumbing fixtures to computer hardware to aeronautical components.



L to R: U.S. Representative Robert Weygand (D-R.I.), John De Villars, EPA Regional Administrator, U.S. Senator John Chafee (R-R.I.), U.S. Senator Jack Reed (D-R.I.), U.S. EPA Administrator Carol Browner, and Edward Marandola, Jr., President of Victory Finishing Technologies, during a tour of the plant.

In the Business World

DfE Aviation Project Wins EPA Environmental Excellence Award

In August, the Experimental Aircraft Association (EAA) was awarded EPA's Environmental Excellence Award for a demonstration project in which EAA stripped and repainted a small aircraft using all non-hazardous products with low emissions of volatile organic compounds. The project demonstrated that less toxic, lower environmental-impact products can be used in small aircraft maintenance and refurbishing without increasing cost, degrading performance, or damaging the integrity of the aircraft.

The EAA demonstration grew out of OPPT's joint DfE project with the U.S. Coast Guard to identify alternatives to methylene chloride in small aircraft paint

stripping. The project began in 1994 when Ric Peri of the Coast Guard recognized that research undertaken on methylene chloride alternatives addressed only large military and commercial aircraft, and did not necessarily produce safe and economical solutions for single- and twin-engine, thin-skinned aircraft. OPPT joined the Coast Guard to fill the gap. Together they worked to identify viable solutions and get them accepted by EPA, the aviation industry, and the Federal Aviation Administration. EAA joined the project as a partner in 1995, and ran the demonstration project this year entirely at its own expense.

Although the project's technical report is in the process of being published, quiet results are already taking place. These include some product reformulations by specialty aviation paint and paint stripping product manufacturers. In addition,

WHAT'S NEW ON THE INTERNET

Growing a Green Business: Now It's Easier on the Web

You won't find this unique mix of businesses on just any website. GreenKeepers Phone Company, Hydrogen Powered Vehicle Project, Costa Rica EcoTourism Development, Plastics Recycling Venture, and Hawaii Eco-Estates are just a few of the ventures in the Sustainable Business Network's (SBN) new "Business Opportunities" section.

"We've launched "Business Opportunities" to encourage the growth of green businesses," explains Rona Fried, Executive Director of SBN. "Our role is to help green businesses find the resources they need to play a dominant role in this economy." The Business Opportunities section of the SBN site provides a forum for green companies that need investors, distributors, licensees, or want information on available RFPs to expand their business.

GreenKeepers, a new long distance phone company, for example, donates a minimum of five percent of its revenue to rainforest reforestation. "We have battled the carriers for very low prices and we pass them on to our environmental allies. Our business objectives are wrapped around our environmental interests from the outset," explains Wayne Umbertis, GreenKeepers president.

SBN covers a range of green business sectors, from recycling to building and construction, from social investing to renewable energy. SBN is part of EnviroLink, an

Internet-based environmental information service, and can be accessed at www.envirolink.org/sbn.

- ▶ **The Printed Wiring Board Resource Center** (www.pwbrc.org) is the latest in a series of Compliance Assistance Centers to open its virtual doors. Each of the five Centers focuses on a different industry and is aimed at helping small businesses understand federal environmental regulations, improve their compliance, and implement pollution prevention technologies. The PWB Center is getting up and running with funding from EPA, in partnership with the National Center for Manufacturing Sciences and the Institute for Interconnecting and Packaging Electronic Circuits.
- ▶ **The Virtual Technology Market (VTM)** is a pilot Internet project of the George Washington University to help researchers in particle technology and multiphase processes find solutions to technical problems that will improve efficiency, lower costs, reduce waste or pollution, or improve material utilization. Both problem statements and solutions can be submitted confidentially or the seeker and solver can be put in touch to work on the problem together. VTM is accessible at www.seas.gwu.edu/guest/vtm.



In the Business World

Ric Peri (himself a pilot, aircraft owner, and aircraft mechanic) has gotten all the players to the table. Through his efforts, links among manufacturers, regulators, aircraft owners, and maintenance facilities are in place to get the alternative products and processes accepted and incorporated into aircraft maintenance manuals and training courses.

U.S. Automakers Join Forces for Cleaner Painting Processes

Detroit's Big 3 automakers have joined forces at a research facility inside a Ford assembly plant in Wixom, Mich. to leverage their strengths in a most unexpected way. Under the umbrella USCAR (United States Council for Automotive Research) organization, the automakers are managing a \$20 million test facility to develop environmentally-friendly powder paint. The three automakers want to be able to use powder paint as the shiny, "clear coat" top layer of paint on new vehicles. Currently, powder paint is only used as a primer coat (vehicle bodies have three different paint coats: primer, color, and clear coat).

"Since the 1960s, hydrocarbon emissions from the domestic automakers' paint

processes at assembly plants have been reduced by 80 percent," said Ernie McLaughlin, Chrysler's lead representative to USCAR's paint consortium. "Chrysler, Ford, and GM did this separately. Now we're working together to achieve further improvements quicker and at a lower cost."

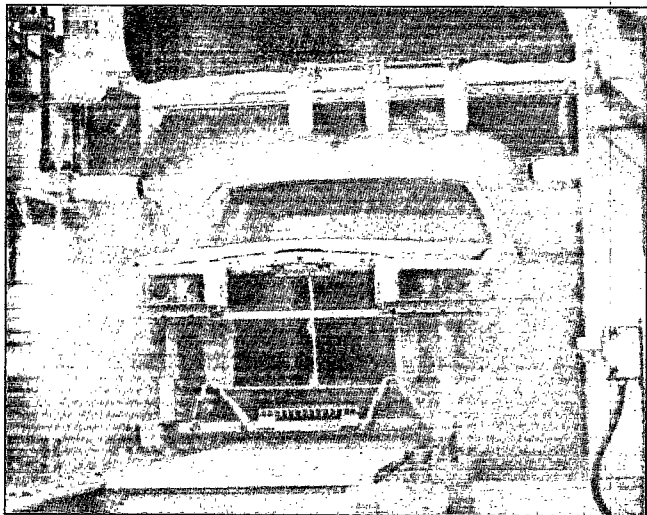
The USCAR powder paint facility aims to reduce or eliminate the ozone-forming gases released into the atmosphere when applying liquid-based clear coat paint. Another advantage of powder paints: the over-spray can be captured, filtered and reconditioned, mixed with new powder paint, and applied to subsequent vehicles coming down the line. By contrast, over-spray from liquid paints used in today's assembly plants is collected and hauled off to landfills.

The USCAR prove-out facility at Wixom approximates the conditions of a production line but without the pressures of the assembly plant. Automakers are still learning how to handle tons of powder daily and figuring out how to overcome other technical

and economic hurdles. Many automotive assembly plants around the world already use powder paint for primer coats, but using powder paint for the clear coat is more difficult because it's the final layer applied to a vehicle and therefore must provide a more lustrous and even more resilient surface than the primer coat. *For more information, contact Chris Terry, USCAR, 248-223-9013 or access the USCAR website (www.uscar.org).*



Gary Christian of Chrysler, Tim March of Ford, and Brian Prylon of GM make their mark on a Dodge Neon.



Lincoln Town Car being sprayed by powder clear coat paint in Wixom facility.

Green Lights

After Six Years, Green Lights Still Growing in Strength

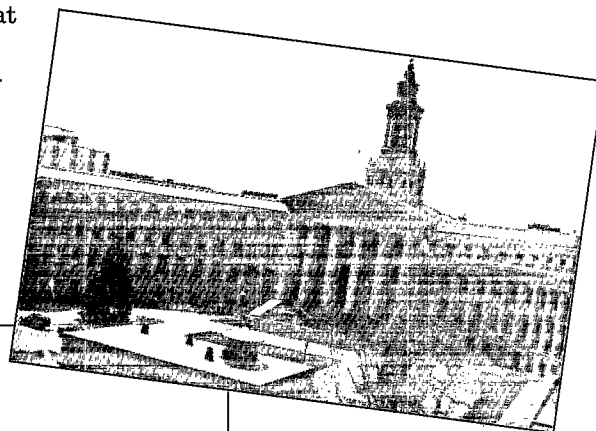
Now in its sixth year, Green Lights® is stronger than ever. With over 2,400 participants and a total of 1.9 billion square feet of "Green Lightspace," 6.4 billion pounds of carbon dioxide are kept out of the atmosphere annually — the equivalent of removing the pollution from 640,000 cars. Participants, including Fortune 500 companies, hospitals, small businesses, manufacturers, universities, and state and local governments, are racking up savings on their electric bills at a rate of more than \$334 million annually as a result of upgrading their lighting to energy-efficient technologies.

When EPA launched the Green Lights Program in 1991, the goal was to create a voluntary energy-efficient program that identified opportunities for organizations to save money while also improving the environment. The response to the program since its inception has been overwhelming. Membership in Green Lights has increased almost ten-fold, making the program a

model by which all other voluntary energy-efficiency programs are judged.

Building on the success of Green Lights, EPA launched Energy Star Buildings in 1995, a comprehensive energy-efficiency program for commercial and industrial buildings that maximizes energy savings associated with the entire building. The program takes advantage of system interactions through a five stage approach to reduce system inefficiencies. Since upgrading lighting is an important first step in improving building energy efficiency, Green Lights is the first stage of the Energy Star Buildings Program. Green Lights participants can now build on the

To reach Green Light/
Energy Star:
Tel: 1-888-782-7937
Fax Back: 202-564-9659
www.epa.gov/greenlights
www.epa.gov/buildings



Local Government Saves Taxpayer Dollars By Cutting Energy Consumption

The City and County of Denver joined the Green Lights program in 1994. Since that time Denver has reduced its energy consumption by 24 million kilowatt-hours per year, saving more than \$1.1 million in combined energy and maintenance costs.

By participating in Green Lights, Denver has taken an aggressive approach to cut energy consumption, save taxpayer dollars, and improve the workplace. "We got involved in the Green Lights Program for a variety of reasons, but mainly because it fit our organizational philosophy," said Darryl Winer, Utilities Director for the City and County of Denver. "It is simply good government, and we are proud to lead by example."

Denver has surveyed more than 14 million square feet and performed upgrades using electronic ballasts, T-8 fluorescents, and specular reflectors. In addition, Denver installed Energy Star compliant LED exit signs in all municipal buildings and use motion detection lighting for additional savings.

In the future, with community assistance, the City and County of Denver plan to upgrade more of its buildings including hospitals, airports, libraries, police and fire stations, offices, and other public facilities.



Green Lights

work they have done and expand their efforts to improve the performance of other building components such as heating, cooling, and ventilation systems.

Presented on these two pages are just a few of the accomplishments of Green Lights Partners.

School District Sees the Light

Students, teachers, and staff all see the light of energy efficiency in Iowa's Davenport Community Schools. Davenport was the first school district to join and complete the Green Lights Program, and ranks Number 11 among all nationwide school districts in preventing air pollution. Director of Support Services Bill Good predicts that the upgrades made so far will result in a district-wide savings of \$250,000 to \$300,000 annually.

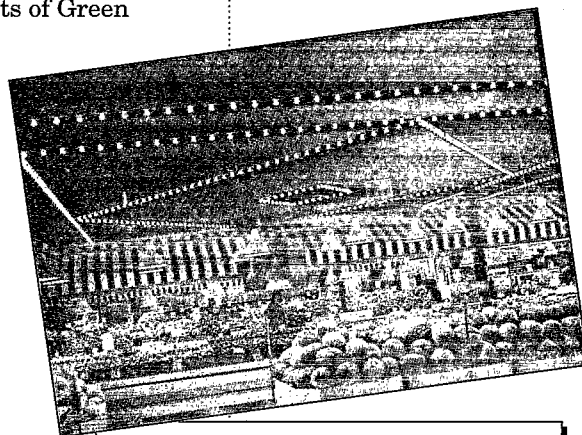
Upgrading the lighting in 40 facilities was a huge task for the school district, which Good estimates cost \$1.8 million. Davenport Community Schools were assisted by their local utility, Mid-American Energy, with \$280,000 in rebates for the new light fixture, ballasts, and LED exit signs. One unexpected benefit of lighting upgrades is that stocking the improved fixtures has become much easier. Only eight types are needed for the whole district, while 65 were needed previously. The maintenance staff also enjoys the longer life of fixtures, which require fewer replacements.

Hospital Upgrades Lighting in Just Six Months

You've heard the saying, where there's a will, there's a way. Well, J.C. Blair Memorial Hospital in Huntingdon, Pennsylvania certainly put its will into being a Green Lights Partner, because it found a way to upgrade the lighting in 100 percent of its space in just six months.

The hospital signed on as a Green Lights Partner in 1996 and six months later had upgraded a total of 185,580 square feet, which will save the hospital \$22,376 annually. "We found that because the majority of our lighting is energized 16 hours or more each day," explained Timothy Davis, Director of Engineering for the hospital, "we could expect a quick payback from participation in the Green Lights Program."

Participating in Green Lights also demonstrated to patients the hospital's commitment to environmental responsibility. In fact, J.C. Blair Memorial was the first hospital in the country to use the new ALTO series lamp for its entire lighting project. Integrating these energy-efficient lamps into its upgrade was an important contribution to its overall environmental mission.



The Green Grocer

In 1990, Larry's Markets, a Seattle-based grocery with five stores, became a Green Lights Partner and began converting 270,000 square feet of floorspace into Green Lightspace, saving more than two million kilowatt hours per year.

The conversion entailed replacing incandescent lamps with compact fluorescents and converting 40-watt T-12 lamps with standard magnetic ballasts to 32-watt T-8 lamps with electronic ballasts. Dimmers were installed to achieve optimum light levels along with timed controls to minimize energy used to light areas at night. Skylights were installed in some stores as a day lighting alternative. Lamps in refrigerated cases were replaced with reflectors allowing the cases to stay cool more efficiently. Since 1990, energy saving lighting upgrades have been completed in four of the five stores.

Through these efforts Larry's Markets save \$75,000 annually on energy bills. To keep motivation high, the company also trains employees in energy efficiency and conservation.

TRI Conference

Using TRI to Make a Difference

Ten years after Right-to-Know and its flagship TRI were created, EPA and the Unison Institute convened a three-day "Toxics Release Inventory and Right-to-Know Conference" in September to assess its impact and explore its future potential. The conference was organized along two key questions: "How Can We Use TRI to Make a Difference?" and "How Can We Improve the Use of Right-to-Know Information?" Sessions addressed a range of topics including community needs, data and integration issues, success stories, and how TRI data can be used to prevent pollution. Conference attendees included representatives from a broad mix of industry, government, and community groups. Following is a sampling of reports from several TRI fronts.

Printing Company Eliminates the Use of Sulfuric Acid

What do children's sheets, pot holders, and party dresses have to do with TRI chemicals? Cranston Print Works in Webster, Massachusetts prepares, prints, and finishes cotton and polyester/cotton blend fabrics that are later used to manufacture all these along with a range of other items. To achieve the brilliant colors its customers demand, Cranston used special dyes that require an acid treatment within the printing process. Specifically, it used acetic acid and sulfuric acid — two substances on the TRI list.

With the enactment of Massachusetts's Toxics Use Reduction Act in 1989, Cranston along with all other Massachusetts firms were required to report their use in excess of a certain amount of any of a list of toxic and hazardous chemicals and pay a fee to the state. Driven in part by the new legislation and in part by their commitment to continuous process improvement, Cranston staff began working with the Massachusetts Office of Technical Assistance for Toxics Use Reduction on a three-pronged program to

reduce the company's reliance on acetic and sulfuric acid. The program consisted of in-process acid recycling, process control charting, and carbon dioxide treatment of waste water.

The results have been dramatic. Overall, Cranston has reduced its use of TRI chemicals by more than 3 million pounds per year since 1992. Specifically, the substitution of carbon dioxide for sulfuric acid in the treatment of alkaline wastewater has eliminated the annual use of 2.66 million pounds of sulfuric acid. In addition, this substitution has reduced the company's annual compliance costs by more than \$3,000.

Measurement Makes a Difference in Massachusetts

The state of Massachusetts is using TRI data in combination with materials accounting data required by its Toxic Use Reduction Act (TURA) to track industry trends in chemical use and waste management.

Rich Bizzozero from the Massachusetts Office of Technical Assistance for Toxic Use Reduction, explained at the conference how a review of Massachusetts TRI and TURA data has revealed patterns in process efficiencies within certain industrial sectors. For example, comparing 1990 TRI and TURA data with 1995 data for the electronics industry showed that although chemical usage increased, by-product waste generation decreased. In 1990 the electronics industry used 30 million pounds of chemicals and generated 13 million pounds of waste by-products. In 1995 the industry used 34 million pounds of chemicals yet generated only 8.4 million pounds of by-product waste. This overall increase in the industry's ability to process chemicals more efficiently implies that effective pollution prevention programs are being put in place.

Massachusetts has also used TRI and TURA data to identify the top five toxic



TRI Conference

chemicals used in Massachusetts and then to target technical assistance and technology transfer programs to alternatives for these chemicals.

CBE's "Good Neighbor Project"

In Minnesota, Citizens for a Better Environment (CBE) has been working from a philosophy that protecting and improving the environment is a shared responsibility of business, labor, activists, communities, academia, and government. To this end, CBE initiated the "Good Neighbor Project" to increase the effectiveness of Minnesota's Toxic Pollution Prevention Act (TPPA) and the federal Community Right to Know Act.

The project started in 1991 when CBE compiled and published a 300-page report called "Get to Know Your Local Polluter." The report used TRI data to profile neighborhoods near 40 Minnesota facilities which produce about 65 percent of the state's toxic pollution. After publishing the report, CBE set up meetings, or "good neighbor dialogues," between managers of companies profiled in the report and residents in neighborhoods affected by the pollution.

So far, dialogues have resulted in eight facilities operating in 21 communities agreeing to work with local citizens. Two of these plants – Crown Cork & Seal and Smith Foundry – have signed agreements with community groups committing to make specific environmental improvements.

In another "good neighbor agreement" reached between the Sheldahl Corporation and Northfield, Minnesota residents, Sheldahl committed to eliminate its use of methylene chloride over a 10-year period. The company beat its deadlines without job loss, erosion of tax base, or loss of profitability.

To expand upon these efforts, in 1995 CBE joined with the Minnesota AFL-CIO to create the Labor Environment Partnership Project (LEPP). One of the project's first goals was to assess the potential to integrate pollution prevention strategies into existing union facilities which report under the Minnesota Toxic Chemical

Release Inventory (TRI). CBE analyzed the 1994 TRI data from 519 facilities which reported releasing 24 million pounds and managing 256 million pounds of toxic chemicals. The findings showed that unionized facilities comprised 35 percent of Minnesota's TRI facilities and accounted for 59 percent of TRI chemicals released into the environment.

The analysis indicated that the unions were an "untapped resource" for facilitating pollution prevention in general and toxic use reduction, in particular. Unions have a long history of working on health and safety issues, often in cooperation with industry at the plant level, and can reach a substantial number of workers in major TRI facilities.

Next: A Scorecard

Now that we have TRI data, how can we use it? The Environmental Defense Fund (EDF) is developing an Internet-accessible database that will help the public understand the impacts of toxic chemicals. Dubbed the "Scorecard Project," the new database is designed to supplement the raw environmental data currently available via TRI with information needed to characterize the public health impact of pollution.

"By interpreting the extensive amounts of complex environmental data into terms understandable by the general public, the Scorecard Project should help increase the political constituency for environmental protection," explained Ken Leiserson of EDF.

The project is being developed in phases. Version 1.0 is scheduled to be accessible on EDF's Web site (www.edf.org) in mid-December. It will provide health impacts interpretation of 1995 TRI toxic releases; a map-based interface to TRI data as a navigational tool for users to obtain profiles of toxins in their neighborhood; a chemical ranking system and chemical group profiles; and action tools linking EDF's Action Network e-mail/fax attach system to relevant targets such as TRI firms, local press, and regulatory agencies.

The Unison Institute can be reached at 202-797-7200. Conference proceedings will be posted at www.rtk.net



Speech

Highlights of Kyoto Treaty

Kyoto Talks Bring Partial Progress on Global Warming

Delegates to the widely covered Kyoto round of global climate change talks came away with a treaty requiring industrialized nations to reduce greenhouse gas emissions 6-8% below 1990 levels by the year 2012. The December 10, 1997 pact includes some of the key elements that the United States had sought, including an agreement to use market mechanisms, such as emissions trading and joint implementation for credit, and coverage of all six significant greenhouse gases. The "second basket" of gases (HFCs, PFCs, and SF6) have up to 20,000 times the global warming potential, on a per ton basis, as carbon dioxide.

Falling short of the comprehensive treaty that had been hoped for, the Kyoto agreement did not include the type of commitments by developing countries that the U.S. Senate has called for in order to ratify a global climate change treaty. The

role of developing countries, as well as details on how emissions trading will work, have been put off until next year's meeting in Buenos Aires.

One bright sign was adoption of a Brazilian proposal for a new fund, the Clean Development Mechanism, to help the developing world obtain energy-saving technologies to combat global warming. Private-sector projects in developing countries that reduced emissions would generate carbon credits that could be sold to a special international body. These credits could then be bought by developed nations to meet their own reduction targets. A share of the proceeds from certified project activities would be used to assist developing countries that are particularly vulnerable to the adverse affects of climate change — such as small island states — meet the costs of adaptation.

Gore on Kyoto

"History was made yesterday in Kyoto because, for the first time, the industrialized nations of the world agreed to a binding and realistic framework to deal with the enormous challenge of global warming. Because of yesterday's agreement, we can now begin to reduce the forms of air pollution that cause global warming. Our air and water here at home will be cleaner, and our businesses will be more competitive in the new global economy...

The agreement will enhance growth and create new incentives for the rapid development of technologies through a system of joint implementation and emissions trading. It creates binding limits. It asks us to do what we promised, not promise what we cannot do. It is comprehensive, includ-

ing all six greenhouse gases...It's also based on the specific timeline that we proposed. And it will create a level playing field for American industry.

Although Kyoto is indeed an important turning point, everybody understands we still have a lot of hard work ahead of us. In many ways, this is just beginning. We still have to press for meaningful participation by key developing nations.... We will not submit this agreement for ratification until key developing nations participate in this effort. This is a global problem that will require a global solution. But I am confident that with the framework achieved in Kyoto and the continued negotiations with the developing world begun there, we will be able to meet this test."

*Excerpt from
Vice-President Gore's
Briefing on Kyoto
Treaty, Dec. 11, 1997*



ABCs of Pollution Prevention

ABCs of Pollution Prevention for Small Businesses

By Lois Epstein, Environmental Defense Fund

- A**void chlorinated organic solvents, cyanide compounds, and petroleum-based compounds when water-based substitutes exist
- B**uy drainboards and drip pans to enhance drip reuse in process baths
- C**hoose closed-loop (i.e., fully enclosed) recycling designs to reduce wastes and worker exposures
- D**ecrease the frequency of painting and paint removal to minimal levels
- E**nsure a neat work environment to prevent spills of toxic chemicals
- F**oster a regular program of pollution prevention planning and auditing
- G**ive employees incentives to find new pollution prevention ideas
- H**ave and use covers for all containers holding fluids that evaporate
- I**nstruct employees in pollution prevention
- J**ust use storage tanks with secondary containment (i.e., double-walled tanks and a barrier around loading/unloading areas)
- K**eep track of toxic chemical inventories to ensure fewer containers on-site, thus minimizing spills, spoilage, and evaporation
- L**abel containers to prevent mistakes that could result in wastes requiring disposal
- M**onitor and maintain the appropriate temperature for heated materials
- N**ever allow leaks to persist
- O**nly use sprays when absolutely necessary, since they waste chemicals through dispersion (e.g., paint overspray)
- P**reclean parts with physical methods (e.g., squeegees, rags) before using solvents
- Q**uit disposing of baths without checking bath quality, and restore quality through the use of non-toxic additives
- R**eformulate or redesign products so fewer toxic chemicals are used in production processes
- S**elect continuous rather than batch processes whenever possible, to avoid start-up wastes
- T**ry redesigning processes so they require fewer toxic chemicals
- U**se machines where toxicity concerns exist and process precision would reduce wastes significantly (e.g., paint spraying)
- V**arnish and other coatings that are not essential should be avoided
- W**ash parts only when absolutely necessary
- X**erox double-sided as often as possible
- Y**ield maximization is one goal, *and*
- Z**ero waste is the other goal.

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Calendar

DATE/SITE	EVENT	SPONSOR	CONTACT	E-MAIL/WWW
March 1-5 Tucson, AZ	Waste Management '98	University of AZ DOE, WERC, ASME, ANS	WM Symposia, Inc. Tel: 520-624-8573 Fax: 520-792-3993	http://www.wmsym.org
March 9-10 Arlington, VA	GEMI '98	Global Environmental Management Initiative	JT&A, Inc. Tel: 703-519-2180 Fax: 703-519-2190	itaincorp@aol.com
April 13 Durham, NH	Sixth Annual New Hampshire Pollution Prevention Conference	University of New Hampshire	Tel: 603-862-4234	learn.dce@unh.edu
April 15-17 Arlington, VA	Second American Wetlands Month Conference	Terrene Institute	Tel: 703-548-5473	www.terrene.org
April 28-30 Dallas, TX	Source Water Protection International '98	EPA, U.S. Geological Survey	Fax: 714-378-3375	NWRI-1@worldnet.att.net
April 28-May 1 Cincinnati, OH	P2 Cincinnati '98	National P2 Roundtable	Tel: 202-466-P2P2 Fax: 202-466-7964	michelrusso@compuserve.com
May 11-13 Miami Beach, FL	6 th Annual North American Waste-to-Energy Conference	A&WMA	Tel: 1-800-270-3444 Fax: 412-232-3450	
May 11-13 Houston, TX	20 th National Industrial Energy Technology Conference '98	CMA, EPRI, DOE, EPA	Tel: 409-847-8590 Fax: 409-862-8687	esl.tamu.edu/ietc/
June 13-18 Albuquerque, NM	SOLAR 98	American Solar Energy Society, American Society of Mechanical Engineers, New Mexico Solar Energy Association, American Institute of Architects	Tel: 303-443-3130 Fax: 303-443-3212	ases.org/solar
June 14-19 San Diego, CA	Air & Waste Management Assoc. 91 st Annual Meeting & Exhibition	A&WMA	Tel: 1-800-270-3444 Fax: 412-232-3450	
August 23-28 Pacific Grove, CA	1998 ACEEE Summer Study on Energy Efficiency	ACEEE, NYSERDA, EPA, DOE	Tel: 202-429-8873 Fax: 202-429-0193	http://aceee.org

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