



Pollution Prevention News

Highlights

2 Resources

PPN makes its debut on the Internet! Plus a bundle of publications from the Office of Solid Waste and elsewhere.

3 Technology

What do pollution prevention and high tech initiatives have in common? Plenty, according to MEP.

4 A Tale of Four Cities

Local communities are experimenting with pollution prevention ideas. We include a sampling and invite you to send in tales of your own town.

11 Case Study

Pollution prevention in the least likely places: a case study from the Federal Correctional Institution at Petersburg, VA.



TRI CHEMICAL EXPANSION

EPA recently expanded the Toxics Release Inventory (TRI) list of chemicals and streamlined the reporting process. On November 28, 1994, EPA issued a regulation adding 286 chemicals and chemical categories to the list of reportable substances. At the same time, EPA made it easier for businesses to provide communities with the information they need about low volumes of chemical releases through the use of a shorter, less time-consuming reporting form. "By working with industry and the communities who use this data, we've come up with a common sense way to make it easier for industries that release lower amounts of these chemicals to provide the information that citizens need and want to know," noted EPA Administrator Carol M. Browner.

Expanding the List of TRI Chemicals

In 1992, slightly over 300 chemicals were included on the TRI. In November 1993, another 32 chemicals, including chemicals regulated under the Resource Conservation and Recovery Act (RCRA) and certain hydrochlorofluorocarbons (HCFCs), were added to the list. The most recent expansion adds 286 chemicals and chemical categories, bringing the total up to 654. Expansion of the chemicals covered under TRI is intended to offer the public a more complete picture of toxic chemicals in their communities, and spur industry action toward further pollution prevention and source reduction opportunities.

The 286 additions include certain toxic chemicals identified in the Clean Air Act, Clean Water Act (Priority Pollutants), and

Continued on page 10

HONDA ANNOUNCES LOW EMISSIONS ENGINE

Surprising the public and the rest of the car industry, Honda announced in January the development of a gasoline engine that reduces emissions by about 90 percent from current standards. The engine has been tested and verified by the California Air Resources Board as meeting California's Ultra Low Emission Vehicle (ULEV) exhaust levels, which will begin to apply to auto manufacturers' fleets in 2000.

The 2.2 liter, 4 cylinder Honda ULEV engine is based on the engine in the car company's top-selling Accord EX. The company notes several features of the ULEV engine:

- (1) use of the Honda's VTEC engine technology which permits a lean air-

fuel ratio from ignition throughout the cold-start period, while maintaining smooth combustion;

- (2) improvements to the catalytic converter to allow fast activation; and
- (3) ultra-precise computerized control of the air-fuel ratio regardless of changing engine conditions, by monitoring each cylinder, comparing the actual air-fuel ratio to the target value, and computing the proper control parameters in real-time.

Honda expects to begin selling cars equipped with the ULEV engine in California in late 1997 for the 1998 model year.

RESOURCES

ENVIRONMENTAL JUSTICE GRANT PROPOSALS

Grant proposals for environmental justice/pollution prevention projects are being sought. Deadline: March 31, 1995. For information, see the January 4, 1995 Federal Register notice (80 FR 452) or contact PPIC at 202-260-1023.

PPN JOINS THE 'NET'!

Check out **Pollution Prevention News** in electronic format. As of the last issue (Oct/Nov 1994), PPN is on the Internet. If you have access to an Internet system with gopher capability, type: "gopher.epa.gov." If you want your name removed from the mailing list because you are accessing PPN on the Internet, please let us know!

POLLUTION PREVENTION NETWORK

The National Environmental Law Center (NELC) is coordinating Pollution Prevention Network for pollution prevention activists focusing on industrial sources of pollution. Bringing together environmental, environmental justice, labor, consumer, and occupational health activists, the Network publishes a quarterly newsletter, **At the Source**, and has compiled packets of information on model policies and strategies. For more information, contact NELC at 617-422-0880.

EDUCATIONAL P2 COMPENDIA

The National Pollution Prevention Center for Higher Education, located at the University of Michigan, has developed educational compendia integrating the teaching of pollution prevention into course work in accounting, business law, chemical engineering, corporate strategy, environmental engineering, industrial ecology, operations management, etc. Compendia include introductory materials, annotated bibliographies, case studies (on McDonald's, Ford Motor Co., Amoco, and others), problem sets, and collections of syllabi. Contact: NPPC, 430 East University, Ann Arbor, MI 48109-1115, Tel: 313-754-1212, Fax: 313-936-2195, E-mail: nppc@umich.edu.

P2 TEXTBOOK

McGraw Hill has recently published a book, *Industrial Pollution Prevention Handbook*, that may be useful as a text for pollution prevention training activities. Harry Freeman, chief of EPA's Pollution Prevention Research Branch in Cincinnati, was the editor (Tel: 513-569-7529).

EPA/OSW REPORTS

We've been catching up on recent (and not so recent) publications of EPA's Office of Solid Waste. They include the following:

► **Joining Forces on Solid Waste Management** (EPA/530-K-93-001, October 1994, brochure) shows how regionalization is working in rural and

small communities to tackle solid waste challenges using pooled resources.

► **The Biennial RCRA Hazardous Waste Report** (EPA/530-SS-94-039, September 1994). As required under RCRA, EPA collects information on the generation, management, and final disposition of hazardous wastes. Based on the latest data collected in 1991, the report includes summary and detailed analyses for each state, a national analysis, and a list of every large quantity generator and hazardous waste facility. Excluding new wastes covered by RCRA since the last Biennial Report in 1989, the amount of hazardous waste generated in 1991 was 29.54 million tons less than the 198 million tons reported in 1989.

► **Strategy Update** is a new, free quarterly newsletter on EPA's Hazardous Waste Minimization and Combustion Activities. (EPA/530-N-94-005, first issue: September 1994). **WasteWiSe** is the newsletter of the voluntary industry program to reduce solid waste. (EPA 530-N-94-006, first issue: December 1994). For information, call 1-800-EPA-WISE.

► **Review of Waste Exchanges** (EPA/530-K-94-003, September 1994) provides a list of over 50 operating waste exchanges in North America plus a detailed analysis of their operations and recommendations for encouraging greater levels of reuse and recycling. Most waste exchanges are small but their number is growing rapidly, particularly with the creation of the EPA-funded National Materials Exchange Network which provides a centralized computer system that reduces the administrative burdens on local exchanges.

► **Waste Prevention Pays Off** (EPA/530-K-92-005, November 1993, brochure) shows how companies cut waste in the workplace, saving money and increasing productivity. Plenty of examples and prevention tips included.

To order any of the above, contact: RCRA Hotline: 800-424-9346 or TDD 800-553-7672 for the hearing impaired. In Washington, DC and outside the U.S., call 703-412-9810 or TDD 703-412-3323.



TECHNOLOGY

MANUFACTURING EXTENSION PARTNERSHIP GIVES A BOOST TO SMALL FIRMS

Over 98 percent of all manufacturers in the United States have fewer than 500 employees. These smaller companies employ about 40 percent of the total manufacturing workforce, account for nearly half of all U.S. industrial output, and, over the past two decades, have provided about 75 percent of employment growth in manufacturing. Yet these companies are often hard pressed to keep up with environmental regulations and to implement new technologies that can enhance their competitiveness.

The Manufacturing Extension Partnership (MEP), a program of the National Institute of Standards and Technology (NIST) of the Department of Commerce, is designed to increase the global competitiveness of smaller manufacturers. In the long run, MEP believes, this mission can only be achieved if smaller manufacturers are empowered to become environmentally sound while improving their competitiveness. MEP is a nationwide system with three components: manufacturing extension centers; a State Technology Extension Program (STEP) to help states identify the needs of their small manufacturers and plan how to serve those needs; and national services and information to support these efforts. The partnership is designed to bridge a technological gap between sources of manufacturing technology and the smaller companies that need new technologies.

The partnership works with state governments, industry, and educational institutions nationwide to establish nonprofit manufacturing extension centers that serve as the focal point for delivering services to smaller manufacturers. The centers are non-federal organizations which have cooperative agreements with NIST, and are selected on a competitive basis. From the initial seven Manufacturing Technology Centers set up in 1989, there are now currently 44 centers in operation, with plans to expand up to 100 centers by 1997. The MEP

budget for FY 1995 is \$90.6 million.

Each center is somewhat different, but most offer technology assessments, access to workforce training, workplace organization, and financing and marketing. MEP centers encourage manufacturers to focus on continuous improvement, rather than just solving the company's immediate production problems.

Pollution Prevention Projects

The Mid-America Manufacturing Technology Center (MAMTC) in Overland Park, Kansas, for example, has been involved with environmentally conscious manufacturing for the last two years. Their efforts began with a series of half-day client workshops held in several locations in Missouri and Kansas. The workshops focused on alternative paints and painting techniques, metal finishing, and solvents, as well as solid waste pollution prevention and regulatory and legal issues.

MAMTC field engineers conduct environmental projects for a range of clients, including: helping a galvanizer obtain financing for a sulfuric acid recovery system; conducting environmental audits with recommendations for improvement; locating alternatives for methylene chloride in a process to dissolve styrene chips; designing an effective plant ventilation system; and locating and installing a metal finishing system to replace a paint dip system.

MEP Solicitation

MEP is now soliciting proposals for \$3.1 million in pollution prevention-oriented projects with a focus on metal fabrication and finishing. Three types of projects will be supported: (1) integrating environmental assistance services into the broader services provided by manufacturing extension centers; (2) the development of environmental technical assistance tools and techniques; and (3) a pilot National Pollution Prevention and Environmental Compliance Information Center. For more information, contact 301-975-5020.

MEP centers encourage manufacturers to focus on continuous improvement

For general information, contact MEP at 301-975-5020. For information on MAMTC, contact Marianne Hudson at 913-649-4333.



LOCAL COMMUNITIES

WE WANT TO HEAR FROM YOU!

Pollution Prevention News is interested in hearing about new programs and ideas in other communities. Write to: Ruth Heikkinen, Editor, *Pollution Prevention News*, U.S. EPA (MC 7409), 401 M Street SW, Washington, DC 20460.

NEED POLLUTION PREVENTION IDEAS? TRY LOCAL PROGRAMS

Local planners and activists who worry about running out of ideas for new programs need look only as far as other localities. Here's a sampling from the press:

STREET OF DREAMS

The Pomegranate Center for Community Innovation plans to educate the public about affordable, environmentally-sound housing options by supporting the development of up to 10 experimental neighborhoods in Washington state. The homes, which will be sold to the public, will educate the public, developers, government officials, and the construction trades about affordable, community-enhancing development.

The projects will be designed to encourage multigenerational residency and neighborliness. Some of the features being considered are narrower streets, smaller lots with collective parks, higher density in exchange for community assets, and the latest energy technologies.

So far, eight developments have indicated an interest in participating in the program. These sites include municipal, county and private developer projects.

For more information, contact Milenko Matanovic at 206-557-6412. (From March/April 1994 *Pollution Prevention Northwest*)

SAN JOSE LAWSUIT SETTLEMENT CREATES P2 CENTER

A Pollution Prevention Center in San Jose, California has been created by an innovative settlement of a lawsuit filed by a coalition of environmental organizations against the San Jose-Santa Clara Water Pollution Control Plant alleging

violations of the Clean Water Act. Under the settlement, the city of San Jose will fund the center for three years. In addition, San Jose will establish a \$2 million revolving loan fund to help small businesses develop source reduction measures to reduce discharges into the San Francisco Bay. (From Spring 1994 *Silicon Valley Toxics ACTION*)

The Center's Convening Board includes three representatives of local government, three representatives of local businesses, and three representatives from local environmental groups.

CINCINNATI AIMS FOR A MODEL PROGRAM

The City of Cincinnati, working cooperatively with the University of Cincinnati and the Institute of Advanced Manufacturing Sciences, Inc. (the Institute), is developing a model "Urban Area Pollution Prevention Strategy." Funded in part by a Pollution Prevention in States (PPIS) grant from EPA, the objectives of the strategy are to promote pollution prevention in city operations, local business and industry, and the local community.

The City's Highway Maintenance Division has switched to water-based, lead-free paint for road painting. The new paint is safer for employees and emits significantly lower volatile organic compounds than the old solvent-based paint which contained lead.

The City plans to conduct waste reduction and pollution prevention assessments at all city facilities, and to make each city department responsible for its own waste disposal costs.

"The intent is for Cincinnati to become a pollution prevention model for other cities," said J. Bruce Suits, Cincinnati's Pollution Prevention Program Manager.

For more information, contact J. Bruce Suits at 513-352-6270.



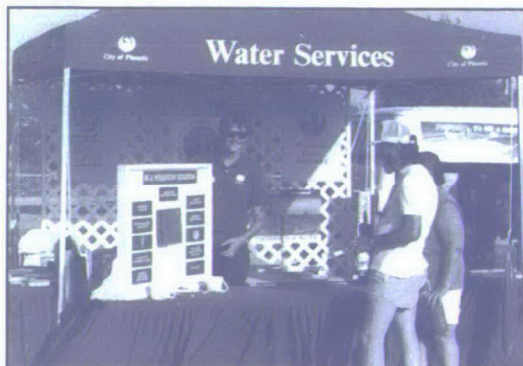
LOCAL COMMUNITIES, CONTINUED

PHOENIX TAKES ITS SHOW ON THE ROAD

The City of Phoenix is taking its pollution prevention program on the road with a low-budget, easy-to-implement outreach program that is attracting a lot of interest. Staff in the Pollution Prevention Program of the city's Water Services Department bring a set of easy-to-transport games to community and corporate forums, where visitors to the city's booth can test their pollution prevention knowledge. Two games are used, one for community events, called "Be a Pollution Solution," and one for industrial trade shows and conferences, called "Pollution Prevention Pays." The questions and answers in the mini-quiz on the right are examples of knowledge tested at industrial trade shows.

The city saved costs by sharing the materials for the two games and by keeping the development work—from research to carpentry—in-house. (A graphic artist, though, helped out on design.) The games are aimed at disseminating basic pollution prevention knowledge and also focusing on the city's key pollutants of concern—mercury, arsenic, lead, and copper.

Since the games were created a year ago, they have been shown 11 times. According to Jenée Gavette, director of the Pollution Prevention Program, "people just line up" to play these games, at events as diverse as hazardous waste conferences and scouting fairs. Maybe it's for the prizes—squeeze bottles, frisbees, coffee mugs and more, all emblazoned with pollution prevention slogans. Interested in knowing more? Contact Jenée Gavette at 602-262-6997.



Pollution Prevention Pays in The Photo Processing Industry

Can you answer these questions?

1. Name two aqueous effluent wastestreams generated by photo processors.
2. What contaminant is found in all photo processing aqueous effluent?
3. Name three of the six methods of silver recovery currently used in the photo processing industry.
4. What can be used on developer solution tanks to prevent loss of potency through oxidation or evaporation?
5. What is the advantage of changing to a "plumbingless" mini-lab?
6. How can chemical carryover from one process bath to another in all manual and some automated processing systems be eliminated?
7. What type of bleach can replace disposable bleach in the C-41 process?
8. How can an air gap in a closed chemical storage container be eliminated?

Answers:

1. Spent rinse water; process bath wastes; color developer wastes; bleach, fix, and bleach-fix wastes.
2. Silver.
3. Metallic replacement cartridges; electrolytic recovery; precipitation; reverse osmosis; ion exchange; evaporation.
4. Floating lids or balls.
5. It uses little water.
6. Use squeegees.
7. Regenerative bleach.
8. By adding glass marbles until the liquid reaches the brim.

ENERGY

CAMPAIGN TARGETS OHIO ENERGY CONSUMPTION

Energy efficiency is the lifeblood of the Ohio economy and the economy needs a transfusion of energy efficiency and renewable energy technologies. That's the conclusion of a report entitled "Energy

"The inefficient use of energy acts as a brake on the economic process."

Skip Laitner

Efficiency as an Investment in Ohio's Economic Future". The report was released November 15 by the Campaign for an Energy Efficient Ohio, as part of its effort to simultaneously improve Ohio's energy supply, environment and economy.

Officially begun on September 21, 1994, the Campaign is a grassroots organizing effort to raise awareness regarding energy consumption. Through education, advocacy and organizing, the Campaign plans to make consumers, as well as owners of commercial buildings and facilities, aware of the issues surrounding energy use and the options for reduction. The Campaign also plans to become involved in regulatory proceedings, such as rate filings, in order to bring energy efficiency issues to the front of the public policy debate.

"The inefficient use of energy acts as a brake on the economic process" and contributes to air pollution and higher economic costs, according to John "Skip" Laitner, the author of the report. The Report examines the energy consumption patterns in the Ohio economy and makes projections of the potential benefits of accelerated investment in energy efficient technologies. Ohio currently spends 9.2 percent of its Gross State Product (GSP) on energy, while the United States as a whole spends only 8.2 percent of GNP. According to the report, a \$28 billion investment in energy efficiency technology between 1995 and 2010 would yield a cumulative savings of \$51 billion over the same period, measured in 1990 dollars. Such investment would benefit Ohio's employment base, boosting the economy by 450,000 jobs over 16 years. The environ-

mental benefits of the plan include the reduction of carbon emissions by about 22.5 million metric tons in 2010.

The Campaign also is distributing case studies of the successful use of energy efficiency technology by Ohio companies. For example:

- ▶ The Big Bear company needed new heating and air conditioning units in its Columbus, Ohio grocery store. The company decided to install energy efficient units with computer controls. The controls run the lighting and refrigeration units, as well as heating and air conditioning. The total cost was approximately \$150,000, and has resulted in savings of approximately \$52,000, for a payback period of less than three years, with savings continuing for the life of the equipment.
- ▶ The National City Bank of Cleveland (NCB) implemented an energy management program which included retrofitting electronic light ballasts and changing t12 lamps to t8 lamps. NCB spent \$100,000 to retrofit its main facility and expects to save \$59,000 annually as a result.
- ▶ In April 1994, Ohio State University (OSU) began retrofitting lighting in all university buildings, a total of about 20 million square feet. Five university employees work full-time installing electronic ballasts and t8 bulbs as part of the multi-year project. "We are seeing a roughly 30 percent reduction in electric loads with no loss of lighting," said Tom Sale, of the OSU Utilities Department. When the program is complete, the university expects to reduce energy costs by 25 percent annually.

For more information on the Campaign for an Energy Efficient Ohio, contact Ken Walker at 614-224-4900.

MORE GOOD P2 NEWS FOR OHIO INDUSTRY

Three companies in Ohio — Brush Wellman Inc., Pegasus Technologies Corp., and Techmetals, Inc. — received 1994 NICE³ grants from the Department of Energy. NICE³ grants are awarded for projects which design, test, demonstrate, and assess the feasibility of new processes or equipment with the potential to increase energy efficiency, reduce pollution, and improve process economics.

ENERGY, CONTINUED

ELECTRIC BUS GOES TO SCHOOL

The first full-sized school bus designed specifically to run on electricity has been transporting children in Lancaster, California since July. Operated by the Antelope Valley Schools Transportation Agency, the bus carries 72 passengers and has a range of approximately 80 miles with an eight hour charging period. The bus features a regenerative braking system which uses the electric motor as a generator to slow the bus, recharging the batteries and saving wear and tear on the brakes. Under a grant from California's South Coast Air Quality Management District, Blue Bird Body Co. designed the body and chassis and built the bus, and Westinghouse Electric Corp. developed the propulsion system.

The electric bus "has been superb as far as durability," said Ken McCoy, CEO of the transportation agency. According to McCoy, the electric bus costs 8 to 9 cents per mile to run, compared with 11 to 26 cents for other fuels. The motor is expected to run 10 years or 100,000 miles before it needs to be serviced. In addition, McCoy said the electric motor creates no noise, making the bus safer because the drivers are better able to hear what is going on both inside and outside the vehicle. Other safety features include the largest possible emergency exits and a governed top speed of 55 miles per hour.

Antelope Valley also is using methanol, compressed natural gas, and advanced diesel buses, under a grant from the California Energy Commission.

McCoy looks forward to testing a new generation of batteries which are expected to double or triple the bus's operating range. With an expanded range use of the electric buses could spread. "I don't think there's any question that this is the future," said McCoy.

For more information, contact Ken McCoy at 805-945-3621 or Roland Gray of Blue Bird at 912-757-7100.

NORTHEAST STATES GET GO-AHEAD TO MOVE TOWARD CLEANER CARS

EPA has approved a plan allowing Northeast states to require automakers to produce a new class of low-polluting cars by 1999. The new cars would pollute 70 percent less than cars currently on the road. The 12 states (CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT) and Washington, DC would try to meet Clean Air Act standards by requiring all cars to meet minimum pollution standards as well. The decision follows a sharp debate by states, automakers, environmentalists, and consumer rights advocates, and was based on EPA's determination that pollution reduction from factories and other stationary air pollution sources would not reduce pollution in the Northeast sufficiently to meet federal air quality standards.



Lancaster's new electric bus.

CORPORATE NOTES

MAKING CHEMICAL SUPPLIERS PART OF THE TEAM REDUCES COSTS FOR GM

General Motors (GM) is reducing the quantity and cost of the chemicals it uses through an innovative new system that provides financial incentives for GM suppliers. Part of the company's "WE CARE" (Waste Elimination and Cost Awareness Reward Everyone) pollution prevention initiative, the new chemical management system uses expertise from outside sources and reshapes the relationship between the supplier and the customer in order to reduce chemical use and disposal.

Like other big car-makers, GM is a large user of chemicals that aid in the manufacturing process. These are called "indirect chemicals" because they are not directly incorporated into the final product. Formerly, a single GM facility might work with more than a dozen chemical suppliers, including several suppliers of the same or similar products. This resulted in more chemicals than necessary in use at a facility and excessive GM staff time to deal with purchasing the chemicals. The large inventory of chemicals tied up capital and cost money to store and manage. Because suppliers made more money when the customer spent more, there was a disincentive for the supplier to reduce the use of chemicals.

The goal of GM's new system is to engage one supplier for all indirect chemicals at a facility. That supplier must obtain from other suppliers any chemicals it doesn't carry that the facility needs. The supplier also provides management, analysis, inventory control, and information management for chemicals used at the facility. Thus the facility no longer purchases chemicals; it purchases a chemicals service.

The supplier is treated as a member of the production team and is paid a fixed amount based on production, rather than

on amount of chemicals used. In addition, the supplier has more expertise than the facility, and may be able to substitute less toxic alternatives and reduce the cost of compliance with environmental regulations. Under this program, the supplier, not the facility, owns the inventory. The supplier therefore has an additional incentive to consolidate the number of products used and the amount of total usage, reducing its costs of inventory, storage, and regulatory compliance. Finally, because a particular supplier is supplying more or all of a facility's needs, the supplier can afford to have an on-site chemicals manager, making chemicals and chemicals information easier and more effective.

The facility no longer purchases chemicals; it purchases a chemicals service.

"WE CARE" IN ACTION

As part of GM's WE CARE program, its Lansing, Michigan Plant 3, which builds hoods, trunk lids and doors for several models of GM vehicles, uses an adhesive to attach the metal skin to interior reinforcements. The adhesive GM had been using resulted in toluene emissions. GM worked with a supplier to identify a non-solvent adhesive that would meet its specifications. After testing, GM began using the new adhesive on assembly lines for three body styles. The result has been the elimination of 300 tons per year of toluene to the atmosphere. In addition, residues of the new adhesive are non-hazardous and non-flammable, and so may be disposed at a lower cost. Using the new adhesive has reduced Plant 3's hazardous waste from 3,000 to 400 gallons per year.

WATER

CHESAPEAKE BAY PROGRAM ADOPTS TOXICS REDUCTION STRATEGY

Calling for a Chesapeake Bay “free of toxics,” the governors of Maryland, Virginia, and Pennsylvania and the Mayor of the District of Columbia in October 1994 adopted a Basinwide Toxics Reduction and Prevention Strategy for the Bay and outlined initiatives for riparian forest buffers, habitat restoration, and agricultural certification programs. In the certification initiative, individuals will be trained and certified to write nutrient management plans for farms — i.e., site-specific plans to manage the application of fertilizer, manure, and sludge in order to keep nutrients on farmland and out of surface and groundwater.

The top priority for the Chesapeake Bay, according to the Chesapeake Executive Council, is speedy implementation of nutrient reduction in the Bay's tributaries. The program has set a goal of reducing nitrogen and phosphorus pollution in the Bay by 40% by 2000. Outgoing Maryland Governor William Schaefer called on his

“Our goal is a Chesapeake Bay free of toxics.”

partners in Virginia, Pennsylvania, and the District of Columbia to “push harder to meet our 40% goal by the year 2000. I'm not

saying it's going to be easy with the pressure 15 million people put on our resources, but it can be done.”

Specific objectives in the 1994 Strategy include:

- ▶ By 2000, federal facilities within the Chesapeake Bay basin will achieve a 75% voluntary reduction in releases and off-site transfers for treatment and disposal of the 14 Chesapeake Bay Toxics of Concern as well as chemicals required to be reported under TRI.
- ▶ By 2000, establish voluntary integrated pest management practices on 75% of all agricultural, recreational, and public

lands within the Bay basin.

- ▶ By late 1995, develop Regional Action Plans for three areas: Elizabeth River in Virginia, Baltimore Harbor, and the Anacostia River.
- ▶ By January 1996, develop and begin conducting a basin-wide communication and education program directed towards reducing consumers' use of products containing harmful chemicals.

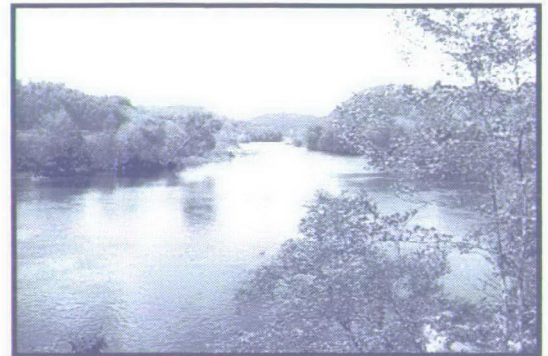
Evolving Understanding

The 1994 strategy signals a shift in emphasis from a narrow focus in the past on point source discharges into the Bay, to a broader targeting of sources identified as significant contributors to the Bay's problems: stormwater runoff and atmospheric deposition. The strategy is based on a two-year evaluation of the original toxics reduction strategy adopted in 1989 by the Chesapeake Bay Program.

The evaluation yielded a mixture of good and bad news. The most severe chemical contamination problems in the Bay appear to be limited to areas located near urban centers close to the Bay — the Patapsco, Anacostia, and Elizabeth rivers. Still, there is no shortage of other Regions of Concern (areas with known chemical contaminant-related impacts) and Areas of Emphasis (areas with potential impacts), which are a focus of the strategy as well.

Meanwhile, existing programs do seem to be reducing inputs of chemical contaminants to the Bay. Success stories include record numbers of striped bass in the Bay, a dramatic increase in the size and density of underwater Bay grass beds, and a 52 percent reduction in reported toxic releases from industry over the last five years.

For more information, contact the Chesapeake Bay Program, 410 Severn Ave., Suite 109, Annapolis, MD 21403, Tel: 410-267-5700, Fax: 410-267-5777.



The James River empties into the Chesapeake Bay.

WATER, CONTINUED

SRRP IN ACTION

The first effluent guideline rule designed for study under the Source Reduction Review Project (SRRP) was the Pesticide Formulating, Packaging and Re-Packaging Effluent Guidelines, proposed on April 14, 1994 (59 FR 17850). Finding that the industry generates relatively small volumes of wastewater and has numerous opportunities for pollution prevention, EPA's proposal was for zero discharge of process wastewater pollutants.

EFFLUENT GUIDELINES FOR METAL PRODUCTS INCORPORATE PREVENTION PRACTICES

Another proposed effluent guideline rule in the works incorporates pollution prevention information and approaches. Phase I of the metal products and machinery (MP&M) effluent guideline is expected to be proposed in Spring 1995. The rule will cover approximately 10,000 facilities engaged in manufacturing, maintaining, or rebuilding finished metal parts, products or machines in the aerospace, aircraft, electronic equipment, hardware, and other related industry sectors.

The MP&M rule was developed at EPA with the assistance of the Source Reduc-

tion Review Project, a cross-Agency effort to integrate prevention into regulatory development. In-process pollution prevention and water conservation technologies were included as a basis for the rule, including flow reduction methods; centrifugation and 100 percent recycling of painting water curtains; centrifugation and pasteurization to extend the life of water-soluble machining coolants (reducing discharge volume by 80%), and in-process metals recovery.

In the course of developing the rule, EPA staff found a large number of site-specific pollution prevention practices that could be useful to other MP&M sites. The MP&M Development Document contains a pollution prevention bibliography of these practices. For more information, contact Bill Cleary at 202-260-9817.

TRI CHEMICAL EXPANSION

Continued from page 1

Safe Drinking Water Act. Approximately half the chemicals added are active ingredients in pesticides. For a complete list of the chemicals, contact the EPCRA Hotline at 1-800-535-0202 or 703-412-9877. EPA plans to develop additional guidance to assist the regulated community in reporting on these new chemicals. Facilities affected are those in the manufacturing sector in SIC Codes 20-39.

Streamlined Reporting Option

EPA was petitioned by the Small Business Administration and the American Feed Industry Association to reduce the burden of TRI reporting for certain types of businesses. A public meeting on the petitions was held in February 1994, and a proposed rule was published in July 1994.

Upon review of the comments and additional analysis, EPA agreed to establish a streamlined reporting option for facilities with low annual reportable amounts of a listed toxic chemical. Facili-

ties that have an annual reportable amount of 500 pounds or less of a TRI chemical, and that manufacture, process or use 1 million pounds or less of a TRI chemical no longer need to complete the current long form of Form R. Instead, such facilities (which otherwise meet the reporting requirements of EPCRA Section 313) can submit a shorter, annual certification statement. Such facilities must also maintain records substantiating the calculations that support their eligibility for the short form.

EPA believes that this rule strikes a positive balance between maintaining the community's right-to-know about toxic chemical releases, and the economic costs (both to EPA and industry) of collecting the information. Like the chemical expansion rule, this reporting modification is effective for reporting activities beginning January 1, 1995 with reports due on or before July 1, 1996. For copies of the certification statement and eligibility requirements, contact the EPCRA Hotline at 1-800-535-0202.

CASE STUDY

SOURCE REDUCTION COMES TO PRISONS

by Janice Johnson,
EPA Office of Solid Waste

Pollution prevention is spreading — even to the unlikelyst of places! One example is the Federal Correctional Institution (FCI Petersburg), located in Petersburg, Virginia, which has developed supplier partnerships and other practices that have benefitted the environment and saved the prison and its suppliers money. A 1992 EPA on-site assessment of the facility's solid waste spurred these and other pollution prevention efforts at the institution, which includes a medium security compound and a minimum security "camp."

At the prison site, Unicolor—an independent corporation with 88 operations nationwide—operates three factories for printing, cable manufacturing, and furniture refinishing. Unicolor produces a variety of products and services for federal agencies, primarily the Department of Defense (DoD) and the General Services Administration.

The prison's recent negotiations with DoD demonstrate the mutual benefits in changing military specifications to minimize packaging waste. According to Bill Stuby, associate warden, one of his cable plant managers immediately spotted a problem when the Defense General Supply Service (DGSS) asked them to pack "10,000 adapters in individual boxes, with 12 boxes to a carton, four cartons to a case, and 12 cases on a skid."

While acknowledging that packaging items in Individual Unit Packs makes tracking easier, Stuby believes that in this case DGSS "carried redundancy" too far. The institution's cable factory manager, packaging foreman, and quality assurance inspector calculated the costs of the packaging materials and the labor involved in meeting the military specification for packaging. The team then set up a meeting with DoD contracting officials to present these findings.

When staff showed DGSS their cost calculations and a sample of the finished product with its required packaging, DGSS officials "quickly realized what they had done and the problems that this excess packaging would create at their warehouse," says Stuby. These negotiations resulted in DGSS dropping the individual unit pack requirement and less waste going into the environment. DGSS saved itself and its customers money on raw material and labor.

Other benefits of the assessment include FCI Petersburg's efforts to buy high post-consumer recycled content materials, and to encourage toxic use reduction among its suppliers and customers. For example, to achieve the ambitious goals of a recent Executive Order, Stuby says that his printing operation, which last year realized \$3.3 million in sales, has convinced several customers to use between 35 and 50 percent post-consumer content paper for such nonwriting uses as book covers. Executive Order 12873 requires that, beginning December 31, 1994, all federal agencies purchase printing and writing paper made with 20 percent post-consumer materials or 50 percent specified recovered materials.

Finally, the facility's toxic use reduction efforts have also yielded savings and benefitted the environment. Following EPA's recommendation, the facility eliminated the use of the solvent 1,1,1-trichloroethane to clean its cables. Although the alternative cleaner, an organic terpene derivative, requires more time and effort to use, Stuby believes the extra effort is worth the \$12,000/year he saves on avoided disposal costs. The printing operation has achieved similar results by switching to soybean ink and a water soluble process to wash equipment.

For more information, contact Janice Johnson at 703-308-7280.



FCI, Petersburg.

Editorial Staff:

Ruth Heikkinen, Editor
Gilah Langner
Joshua Katz
Free Hand Press, Layout

To be added to our mailing list, please write:

Pollution Prevention News
U.S. EPA (MC7409)
401 M Street NW
Washington, DC 20460

or fax to:
Ruth Heikkinen,
202-260-2219

Printed on recycled paper.

CALENDAR

TITLE	DATE	LOCATION	CONTACT
Low- and No-VOC Coating Technologies International Conference	March 13-15	Durham, NC	EPA AERL, 919-541-5816
AIChE Spring National Meeting/ Petrochemical & Refining Expo	March 19-23	Houston, TX	Jeff Lenard, AIChE, 212-705-7660
1995 SO ₂ Control Symposium	March 28-31	Miami Beach, FL	EPA, DOE, EPRI, 415-855-2010
Gulf of Mexico Symposium 1995: Steering a Course for the Future	March 29-April 1	Corpus Christi, TX	Gulf of Mexico Program, 800-699-GULF
National Pollution Prevention Roundtable, Spring Conference	April 2-5	Austin, TX	Natalie Roy, 202-543-7272
EPA 21st Annual RREL Research Symposium	April 4-6	Cincinnati, OH	Emmalou George, EPA/RREL, 513-569-7578
DfE Conference on the Environment for Screen Printers	April 6-7	Chicago, IL	Stephanie Bergman, EPA DfE, 202-260-1821
Environment Virginia '95	April 6-7	Lexington, VA	Ronald Erchul, Virginia Military Institute, 703-464-7331
Innovative Concepts Technology & Business Opportunities Fair	April 20-21	Denver, CO	Jerry Holloway, Pacific Northwest Laboratory, 509-375-2007
The Safety Professional's Role in Environmental Management	April 20-21	Chicago, IL	National Safety Council, 800-621-7619
DOE Pollution Prevention Conference XI	May 16-18	Knoxville, TN	Linda Josie McDonald, DOE Oak Ridge, 615-435-3415

Moving? Please enclose mailing label!

United States Environmental
Protection Agency (MC7409)
Washington, DC 20460

Official Business
Penalty for Private Use \$300

BULK RATE
POSTAGE & FEES PAID
EPA
PERMIT NO. G-35

Forwarding & Return Postage Guaranteed
Address Correction Requested