



# Pollution Prevention News

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Your comments and letters are  
welcome. Please write:  
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## DOD Issues Prevention Directive

On July 27, 1989, Deputy Secretary of Defense D.J. Atwood issued a new directive that applies across the board to all DOD departments and agencies, in essence calling for the integration of environmental objectives into the overall mission of DOD. According to the directive, "It is DOD policy that hazardous material shall be selected, used, and managed over its life cycle so that the Department incurs the lowest cost required to protect human health and the environment. The preferred method of doing this is to avoid or reduce the use of hazardous material. . . Emphasis must be on less use of hazardous materials in processes and products, as distinguished from end-of-pipe management of hazardous waste."

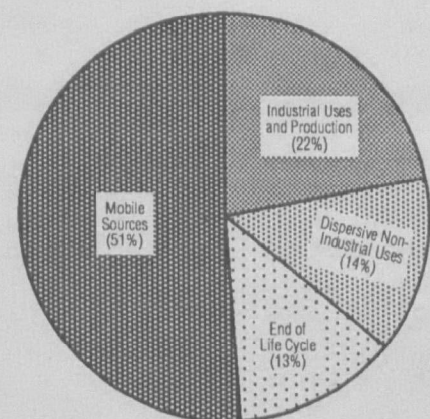
The directive gives responsibility to the

Assistant Secretary of Defense (Production and Logistics) for ensuring that adequate guidance, reporting, information exchange, and programs exist to implement the directive. Among other requirements, DOD components will be required to begin economic analyses of hazardous material decisions at the earliest possible stage and to substitute the use of less hazardous materials whenever possible. The heads of military services and defense agencies within DOD are directed to designate lead offices to coordinate their actions, develop Hazardous Material Pollution Prevention Plans to implement the directive within 180 days, and present annual briefings on the status of their efforts. For further information, contact Sam Napolitano, (703) 325-2211.

## Editor's Corner

As we suspected, the TRI (Toxic Release Inventory) data recently released by EPA is yielding a lot of very interesting information. It is particularly interesting to examine the TRI data in light of other estimates of pollutant emissions. You may recall that the TRI data from 1987 showed a staggering total of 10.4 billion pounds of pollutants being released into water, land, and air by about 17,500 facilities. And yet, as unsettling as these figures are, they still don't tell the whole story.

Take, for example, air emissions. According to the TRI data, 2.7 billion pounds of volatile organic compounds (VOCs) were released into the air in 1987 from regulated facilities. But what about air emissions from industrial facilities that were not required to report releases? (Only manufacturing facilities with 10 or more employees, handling one or more of the 300 TRI chemicals, are required to submit annual release information to EPA.) And what about non-industrial air emissions, from cars, trucks,



Annual U.S. VOC Emissions — NAPAP Estimates

paints, and a host of other sources? In short, what are total VOC emissions in the United States?

One estimate was recently made by National Acid Precipitation Assessment Program (NAPAP), an umbrella organization for federal

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# Reports from EPA Offices

## Water Programs Promote Prevention Ethic

by Elisabeth La Roe, Office of Water Regulations and Standards

Water programs have been practicing pollution prevention for years, and welcome the new emphasis the Agency and Congress are placing on prevention. We view prevention as an essential part of our basic mission to restore and maintain the Nation's waters. We see this as an opportunity to move our programs more fully into a resource protection mode.

Water programs are fortunate. We have a variety of tools to promote prevention, ranging from traditional top-down regulatory schemes in the NPDES and pretreatment programs to "bottom-up" approaches in the newer, geographic-based programs such as nonpoint source (NPS), National Estuary Program (NEP), wetlands, and well-head protection (WHP). The latter programs are very prevention-oriented, relying heavily on education and public awareness to change individual and land use behavior to prevent pollution from occurring rather than controlling after-the-fact pollution.

The pollution prevention strategy now being developed for water programs places highest priority on natural resource conservation, supported by the Agency's water management hierarchy. We plan to incorporate the pollution prevention ethic broadly into our activities to conserve the natural resources — water, wetlands, ground water, estuaries and coastal waters — that constitute the legacy we leave to future generations. In addition, we will promote and incorporate the Agency's hierarchy into our other programs, including effluent guidelines, permitting, and enforcement.

Water programs are placing special attention on pollution prevention in our grass-roots programs. A few examples may be helpful. Agricultural runoff pollution from nonpoint sources is one of the most serious water quality issues we face today. Pollutants are both conventional and toxic with pesticides at the top of the list. Our pollution prevention approach is to encourage agricultural practices that reduce the level of pesticides used on farms, and to "target" our early efforts to agricultural lands adjacent to critical aquatic resources such as the near coastal waters.

A second planned activity is to acceler-

ate and combine our outreach efforts in the NPS, WHP, NCW, NEP, and wetlands programs to promote pollution prevention through sound state and local land use practices and comprehensive, multi-objective planning (including land conservancy). With land use having a direct impact on water quality, land use practices are key to preventing needless pollution and avoiding the need for costly controls at a later date. Since land use is a state and local responsibility, however, our role is to support and reinforce states and local governments as they make the difficult decisions that impact water quality, to improve their knowledge of sound land use practices, and to provide a scientific basis on which to make these public policy decisions.

For further information, contact Elisabeth La Roe, (202) 382-7158.

## EPA Region 9

The Pollution Prevention Program in Region 9 (covering Arizona, California, Nevada, Hawaii, and Territories) has defined two major objectives for its activities over the next year. First, the program aims to institutionalize the concept of multimedia pollution prevention throughout Region 9's media programs. This goal will involve identifying and incorporating pollution prevention themes into Region 9's FY 1990 workplanning process; incorporating pollution prevention into state cooperative agreements; establishing a region-wide pollution prevention communications network; and augmenting in-house recycling

efforts. Region 9's Pollution Prevention Team is being guided in these efforts by a Pollution Prevention Steering Committee, chaired by the Deputy Regional Administrator, with membership consisting of the Deputy Directors of the Toxics, Water, and Air divisions, the Director of the Office of External Affairs, and the Assistant Regional Administrator for Policy and Management.

A second objective of Region 9's program is to initiate specific pilot projects. One such project involves the South San Francisco Bay whose waters show high concentrations of heavy metals and other toxic pollutants. Discharges from three publicly owned treatment works (POTWs) in San Jose/Santa Clara, Sunnyvale, and Palo Alto, and from several storm sewers are believed to be the predominant sources of the pollution. Efforts are underway in each of the jurisdictions to reverse the environmental degradation of the South Bay. The Regional Water Quality Control Board is requiring each of the major cities involved to conduct a waste minimization study.

EPA will be working closely with the Regional Water Quality Control Board to research and assess the feasibility of new or modified industrial processes to achieve an overall net reduction in releases of toxic metals and cyanides. Between now and July 1990, EPA also anticipates providing technical guidance and coordination to the Cities of San Jose, Santa Clara, Sunnyvale, and Palo Alto to implement the findings of the project and the waste minimization studies.

For information on Region 9's programs, contact Laura Yoshii, (415) 974-7460.

## Editor's Corner (from page 1)

agencies working on acid rain issues. NAPAP puts total annual VOC emissions in the U.S. at 46 billion pounds. That's 17 times the amount of toxic chemicals reported by TRI facilities. As the pie chart shows, just over half the VOCs are coming from mobile sources. Industrial production and uses account for 22 percent of VOC emissions. Non-industrial uses and end of product life cycle (through fires and incinerators) accounted for the remaining 27 percent.

What does this tell us? For one thing, it is becoming increasingly clear that we must broaden our concept of the problem beyond

the universe of currently regulated facilities. Which is not to say that currently regulated facilities no longer need regulation or that no more facilities should be regulated. What we are saying is that focusing solely on the current roster of facilities is simply not going to solve the problem. The problem out there is orders-of-magnitude greater than is indicated by the already alarming TRI data. And it is unrealistic to think that regulation alone, whether by EPA or the states, can handle that job. We will need a wide variety of cooperative and regulatory approaches to make a dent in these numbers.

# Resources

## Waste Minimization Guidebook

*Waste Minimization: Manufacturers' Strategies for Success.* National Association of Manufacturers. 1989. Contact Theresa Buckley, 1331 Pennsylvania Ave. NW, Suite 1500, Washington, D.C. 20004-1703, (202) 637-3155. \$19.95 NAM Members/\$29.95 Non-Members.

This is a guidebook intended particularly for small manufacturers interested in undertaking voluntary initiatives to reduce the volume of waste they generate. The publication includes case studies of successful waste minimization efforts and lists of contacts and resources available to manufacturers for assistance and advice.

Also included is a step-by-step guide to establishing and implementing a waste minimization program in a manufacturing facility. The guide notes that a successful waste minimization program starts with three elements: (1) a formal, written policy on waste minimization philosophy, practices, and objective; (2) the commitment of top management to supporting and providing resources for the program; and (3) appointing a program leader with ultimate responsibility for the success of the program. The larger the industrial operation, the more important it is for the program leader to pull together a waste minimization team that includes representatives from all major departments involved in waste generation and management. (See Figure 1.)

With a waste minimization team in place, the first step is to establish an inventory of wastestreams using in-house sources such as manifests, generator reports, audit reports, inventory and usage records, monitoring data, permits, production records, etc. The guide book stresses the importance of visiting each major process unit and/or waste generating site in the course of compiling this information, and the need to get first-hand information and input from the operators and maintenance personnel who understand daily and year-to-year operations. Subsequent steps in getting a waste minimization program underway include prioritizing waste streams and processes, developing and evaluating options for

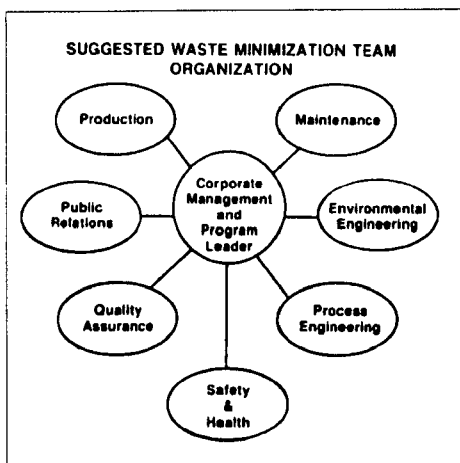


Figure 1.

Source: ENSR Corp./NAM

waste minimization, selecting and implementing feasible options, and monitoring progress.

## Model State Legislation Available

**Hazardous Waste Reduction Act.** Contact R. Steven Brown, Director, Center for Environment and Natural Resources, Council of State Governments. P.O. Box 11910, Lexington, KY 40578. (606) 231-1882. Free.

The Council of State Governments has developed model state legislation for hazardous waste reduction, based on bills and programs in five states — a waste reduction plan requirement for industry introduced in Oregon; New York State's small generator audit assistance program; Kentucky's tech-

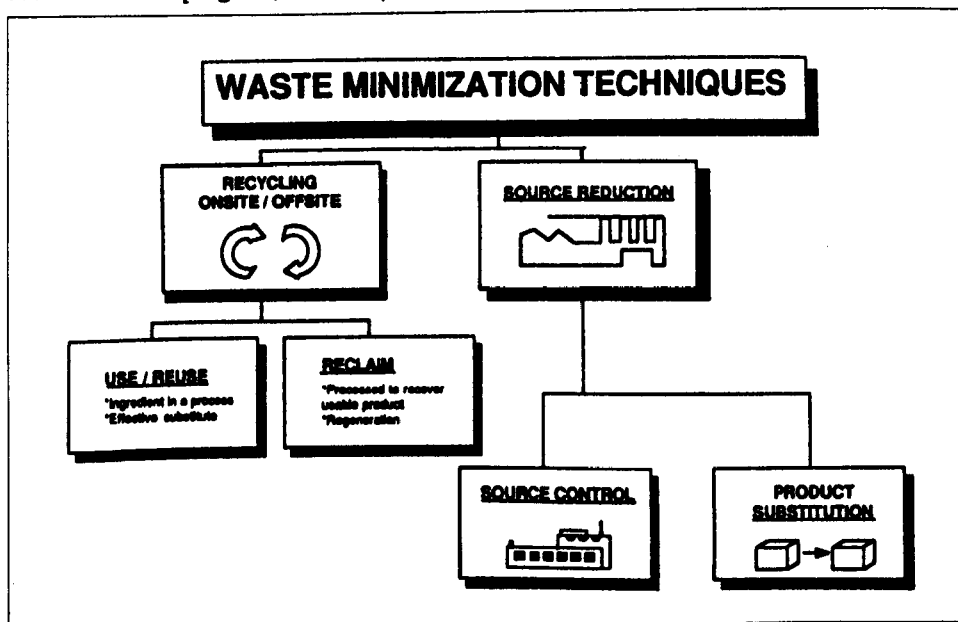
nical assistance center; North Carolina's proposed cross-media, state-wide 30% pollution reduction goal; and Minnesota's hazardous waste generator fee schedule.

The Council of State Governments is a national, non-partisan organization of all 50 states that functions as a research arm, clearinghouse, and source of legislative ideas for state officials.

## Industrial Overviews

**Hazardous Waste Minimization: Industrial Overviews.** 1989. Editor: Harry M. Freeman, U.S.EPA. JAPCA Reprint Series RS-14. Air & Waste Management Association, P.O. Box 2861, Pittsburgh, PA 15230. (412) 232-3444. \$20 Members/\$30 Non-Members.

The Air & Waste Management Association has published a collection of 13 articles appearing in its journal JAPCA over the last two years on the subject of waste minimization. The articles summarize what is currently being done to minimize wastes in selected industries, providing diagrams of typical processes and an outline of feasible technologies for reducing waste. Industries covered include the chemical industry, electronic products, paint and allied products, metal finishing, petroleum, foundries, pesticide formulation, and automotive repair. Several articles also discuss federally sponsored R&D on waste minimization and waste minimization efforts in the Department of Defense.



Source: Hazardous Waste Minimization: Industrial Overviews

# Upcoming Events in September, October

<u>Title</u>	<u>Sponsor</u>	<u>Date/Location</u>	<u>Contact</u>
The Next Frontier in Curbside Recycling	California Dept. of Conservation, Plastic Recycling Corp. of CA	Sept. 12, Los Angeles, CA Sept. 14, San Francisco, CA	Mari Olsen (213) 487-1544
Haztech International '89 Conferences & Exhibitions	Haztech International	Sept. 12-14, Cincinnati, OH Sept. 27-29, San Francisco, CA	Ursula Barril (800) 468-7644
Metal Waste Management Alternative Symposia	EPA, California Dept. of Health Services	Sept. 12-13, Pasadena, CA Sept. 18-19, San Jose, CA	Deborah Hanlon (818) 449-2171
Recycling/Composting Solid Waste and Sludge	Biocycle, Maine Dept. of Env. Protection, others	Sept. 13-15, 1989 Portland, ME	Celeste Madtes (215) 967-4135
North American Waste Exchange Conference	Renew (Texas Water Commission)	Sept. 17-20, 1989 San Antonio, TX	Sheri Estes (512) 463-7754
Waste Expo's "Solutions"	National Solid Waste Management Association	Sept. 19-20, Philadelphia Oct. 10-11, San Jose, CA	Patti Jo Barber (202) 659-4613
Succeeding at Waste Reduction/Minimization	Univ. of Wisconsin, Dept. of Engineering Professional Development	Sept. 27-28, 1989 Madison, WI	Pat Eagan (608) 263-7429
11th Canadian Waste Management Conference	Environment Canada	Sept. 27-29, 1989 Montreal, Que.	Johanne Leveille (514) 384-4010
1989 Recycling Conference & Exposition	Recycling Office, Westchester County Govt.	Oct. 4-5, 1989 White Plains, NY	Abby Pelton (914) 285-2588
Environmental Hazards Conference/Exposition	Hazmat World, EHMI, Tower Conference Management	Oct. 10-12, 1989 Hartford, CT	Bob Myhelic (312) 469-3373
6th Annual Environmental Exposition	Environmental Exposition, Inc.	Oct. 16-18, 1989 Asbury Park, NJ	Linda Siecke (201) 782-0062
HazWaste Expo Chicago '89	Hazardous Waste Management Magazine, Transportation Skills Program	Oct. 16-19, 1989 Rosemont, IL	Robert McCarty (215) 683-5098

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