

Pollution Prevention Report 2003



December 2003

2003 highlights

Virginia law requires the Department of Environmental Quality (DEQ) to establish a voluntary pollution prevention technical assistance program and to report annually to the Governor and the General Assembly on its activities. This report summarizes DEQ's pollution prevention (p2) efforts during the year 2003.

The Office of Pollution Prevention (OPP), which carries out DEQ's p2 program, was greatly impacted by state budget reductions in the fall of 2002. Seven of the program's ten positions were reassigned to other non-state funded areas of the agency. Some aspects of the program were eliminated in 2003, including on-site p2 technical assistance, and some were significantly reduced in scope.

Nonetheless, OPP continues to promote p2 and environmental management systems through a variety of programs. Highlights from 2003 include:

- Continued promotion of environmental management systems and p2, primarily through the agency's Virginia Environmental Excellence Program, including outreach and the development of incentives;
- Announcement in November of a new outreach initiative for the healthcare industry called Virginia Hospitals for a Health Environment;
- Expanded promotion of energy conservation, efficiency and renewable energy technologies; and,
- Successful completion of the Commonwealth's first coordinated electronics recycling pilot project.

DEQ Director Robert G. Burnley (right) presenting DuPont Front Royal's Jim Nicola with the facility's E3 certificate under the Virginia Environmental Excellence Program.



In 2004, the Office of Pollution Prevention will be focusing on a few primary areas, including:

- Full implementation of the Virginia Hospitals for a Health Environment initiative;
- Co-hosting of a "green lodging" conference;
- Expanded efforts to reduce hazardous waste generation by promotion of the National Waste Minimization Plan; and,
- Continued outreach in the areas of renewable energy and regulatory incentives for environmental performance.

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Virginia Environmental Excellence Program



Secretary of Natural Resources Tayloe Murphy (*right*) presenting an E3 certificate to Brown & Williamson company officials Bill Murphy and R. Walquist.



E2: A facility must submit the following to be recognized as an E2 facility:

1. Environmental policy statement outlining the facility's commitment to improving environmental quality
2. An evaluation of the facility's environmental impacts
3. Objectives and targets addressing the facility's significant environmental aspects and other environmental impacts
4. Pollution prevention plan

Background: The year 2003 marked the third year of implementation for the Virginia Environmental Excellence Program or VEEP. The program is designed to encourage and recognize the use of environmental management systems (EMS) and pollution prevention.

There are two levels of participation in the program, "Environmental Enterprise" or E2 and "Exemplary Environmental Enterprise" or E3. Participating facilities receive public recognition, assistance from mentors and other incentives.

Progress to Date: At the end of October 2003, there were 152 facilities participating in the program, 134 at the E2 level and 18 at the E3 level, an increase of 20 percent over 2002.

For 2004, one of the VEEP program's primary goals will be quantification of the environmental results of the program. Other goals for 2004 include revision of the program application and clarified and streamlined reporting techniques.



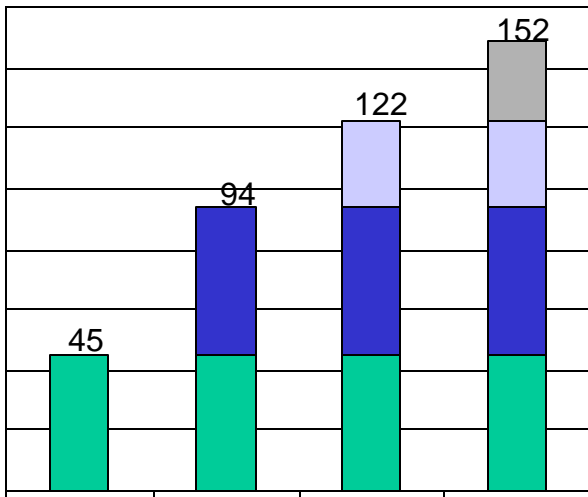
E3: A facility must be able to demonstrate that it possesses a fully-implemented EMS, a pollution prevention program (with documented results) and a record of sustained environmental compliance to be accepted as an E3 facility. The EMS should include:

- Environmental policy statement;
- Actual or potential impacts to the environment;
- Pollution prevention program;
- Environmental legal requirements;
- EMS roles & responsibilities;
- Reporting & record keeping;
- Employee training;
- Emergency response procedures;
- EMS monitoring, investigative & corrective actions;
- Voluntary self assessments; and,
- Communications procedures.

Representatives of DEQ and the Fairfax County Board of Supervisors recognize the efforts of the County's Wastewater Management Program and the Department of Vehicle Services upon receiving E2 designation.



Virginia Environmental Excellence Program: implementation of incentives



**Virginia Environmental Excellence
Program Participants**
(August 2000 - November 2003)

One of the chief benefits of participation in VEEP at the E3 level and EPA's related program, the National Environmental Performance Track (NEPT), is potential regulatory flexibility. During 2003, DEQ was an active participant in the dialogue occurring within Virginia and at the national level on rewarding "high-performing" facilities.

In both June and December 2003, DEQ hosted VEEP stakeholder meetings with representatives of businesses and citizen groups to discuss implementation of regulatory flexibility incentives. Issues include providing assurances that participants remain in good standing with the program (including maintaining compliance with environmental requirements), communication of incentives throughout the regulatory agencies, progress reporting, and coordination of delivery of the incentives, among others.

DEQ also continued to work closely with both the EPA Region III and Headquarters to better coordinate VEEP with NEPT. Building on the

Memorandum of Agreement signed by the two agencies in 2002, DEQ and EPA have developed a number of strategies aimed at streamlining the administration of the programs, providing coordinated benefits and better quantifying environmental results. For instance, in the future, any Virginia facility accepted into the NEPT will be automatically accepted into VEEP as an E3 facility, which will reduce administrative costs and increase recognition opportunities.

Finally, DEQ has been an active member of the Region III Performance Track Network, which consists of representatives of state environmental agencies and NEPT facilities from the Mid-Atlantic region. The Network met twice in 2003, focusing its efforts on program development and coordination as well as implementation of incentives.

Future Plans: In 2004, DEQ expects to complete a pilot project under the auspices of the Environmental Council of the States to identify the "implementation path" for regulatory incentives for VEEP/NEPT facilities. The project will focus on identifying the steps necessary to implement incentives adopted at the national level at all levels of a state environmental agency (such as DEQ).



DEQ's Keith Boisvert at a meeting to discuss VEEP incentives.

P2 & the Chesapeake Bay



BACKGROUND: Businesses for the Bay (B4B) is the voluntary pollution prevention program in support of the Chesapeake Bay restoration effort. DEQ promotes B4B to Virginia businesses and other organizations and serves on the multistate p2 workgroup of the Chesapeake Bay Program's Toxic Subcommittee.

The "Toxics 2000 Strategy" of the Chesapeake 2000 Agreement recommits to the 1994 Toxics Strategy goal of a "Chesapeake Bay free of toxics by reducing or eliminating the input of chemical contaminants...". The strategy embraces the concepts of voluntary "pollution prevention, reduction and elimination" as a means to reaching this goal and sets challenging goals for Businesses for the Bay. The next year will be a critical one in terms of attaining the programs goals of:

- Preventing or recycling a total of one billion pounds of hazardous substances between 1999 and 2005.
- Having 1,000 participants by 2005; 50% will be small businesses having fewer than 100 employees.
- Having a total of 300 mentors providing voluntary peer-to-peer mentoring assistance by 2005; the mentors will annually conduct 500 interactions with those in need.

PROGRESS TO DATE: Significant progress has been made toward the revised goals. As of October 2003, B4B had over 540 participants (more than 50% of the goal) throughout the watershed and approximately 120 mentors (40% of the goal) providing peer-to-peer mentoring assistance. Of the total, almost half the members (241) and mentors (54) are from Virginia. In 2002, the most recent date for which data is available,

Virginia B4B participants reported 16.7 million pounds of waste reduced and cost savings of about \$664,000.

In October, the Chesapeake Executive Council, the governing authority responsible for the overseeing the restoration effort, presented the *B4B* Excellence Awards. The Council consists of the Governors of Maryland, Pennsylvania, and Virginia, the EPA Administrator, the Mayor of the District of Columbia and the Chair of the Chesapeake Bay Commission. Virginia Governor Mark Warner currently serves as the Council's Chairman. Nine Virginia organizations were recipients of awards:

- *Outstanding Achievement Award for a Large Business: Infineon Technologies* (Sandston)
- *Significant Achievement Award for a Large Business: Brown & Williamson Tobacco Corporation - Hanmer Division* (Chester)
- *Outstanding Achievement Award for a Local Government: Southeastern Public Service Authority* (Chesapeake)
- *Significant Achievement Award for a Local Government: City of Newport News*
- *Significant Achievement Award for a Local Government: City of Manassas Maintenance Garage & Wastewater Treatment Plant*
- *Outstanding Achievement Award for Federal Government Facility: Fort A. P. Hill*
- *Outstanding Achievement Award for Federal Government Regional Operation: Commander Navy Region Mid-Atlantic* (Norfolk)
- *Co-Mentors of the Year: Dave Gunnarson and Harry DeLong* of Lockheed Martin (Manassas)
- *Certificate of Appreciation, Hardy Building Corporation* (Virginia Beach)



Mary Lynn Wilhere, B4B Coordinator, Janice Gates, Hardy Building Corporation and Tom Griffin, DEQ, at the Businesses for the Bay awards ceremony in October.

Background: Virginia Hospitals for a Healthy Environment (VH2E) is a voluntary initiative aimed at educating Virginia health care professionals about the significant environmental impacts of their industry. In addition, VH2E also provides information on the many pollution prevention opportunities that are available to hospitals and other health care facilities. The initiative was developed in support of the national Hospitals for a Healthy Environment effort and is aligned with the goals of the Memorandum of Understanding signed by the American Hospital Association and the Environmental Protection Agency in 1998.

DEQ began discussions with Virginia hospitals several years ago, and, in 2002, a workgroup was established with the help of the Virginia Hospital & Healthcare Association and various other partners. The VH2E Workgroup's goal was to develop a Virginia program to complement the national partnership on a state level. VH2E has its own set of goals that were designed as achievable, practical tasks to support the national goals.

Progress to Date: In November, DEQ Director Robert G. Burnley and Laura Brannen, Director

VH2E GOALS: Participants in VH2E are voluntarily committing to:

- **Eliminate Mercury**
 - Develop a list of mercury-containing products used within the facility
 - Develop a mercury-free purchasing policy
- **Reduce Waste**
 - Collect baseline data on Regulated Medical Waste (RMW) and solid waste
 - Develop a RMW reduction program, perform in-service training for new RMW regulations and post VH2E signage
- **Reduce Toxicity**
 - Establish a committee or "Green Team" to encourage environmentally preferable purchasing (EPP) at the facility
 - Develop and implement at least three EPP/Toxicity Reduction Projects

of the national Hospitals for a Healthy Environment project, co-signed a letter officially announcing VH2E. The letter invites interested Virginia facilities and organizations to commit to the goals of VH2E as charter VH2E members.

Future Plans: A kick-off media event is being planned for early 2004 to recognize the charter members and to encourage all Virginia healthcare facilities to join this voluntary partnership.

VH2E Program Partners:

- Virginia Hospital & Health Care Association
- Virginia Department of Health
- Virginia Nurses Association
- Virginia Dental Association
- Virginia Health Care Waste Management Cooperative
- Healthcare Without Harm
- Medical Equipment Recovery of Clean Inventory (MERC) Foundation

Sample of poster on regulated medical waste developed and distributed by DEQ.



Electronics Recycling

Two years ago, the Office of Pollution Prevention (OPP) partnered with the Environmental Protection Agency and other states in the Mid-Atlantic region to begin an electronics recycling pilot project called the “*eCycling Program*”. It was completed during 2003.

The effort brought together federal, state and local governments, as well as vendors with ties to the electronics industry. These groups coordinated one-day events for citizens to drop off unwanted electronic equipment for environmentally-responsible recycling. This service was most always provided free of charge. Participants were asked to complete a survey when dropping off materials. Data from the surveys will contribute to the development of a permanent electronics-recycling infrastructure.



eCycling events during 2003 took place in Wise County and Charlottesville. In Charlottesville, the University of Virginia partnered with the Rivanna Solid Waste Authority, collecting 28 tons of equipment for the most successful one-day electronics recycling collection ever in Virginia.

Over the two-year life of the project:

- DEQ helped **coordinate, fund and recruit volunteers to staff collections in 5 different localities.**
- Approximately **2.2 million Virginians** were given the opportunity to recycle unwanted or obsolete electronic equipment at no or low cost.
- Ultimately, **about 100 tons of this material** was diverted from Virginia landfills and into recycling alternatives.

Environmental concerns related to electronics:

- Nationally in 1998, 20 million computers became obsolete; only 14% of these were recycled or reused.
- In 2003, 63 million computers are expected to be retired in the US.
- Computers and cathode ray tubes are currently the largest contributors of lead, mercury and cadmium to the municipal waste stream in the US.

(Source: USEPA website)





Greening of the Hospitality Industry

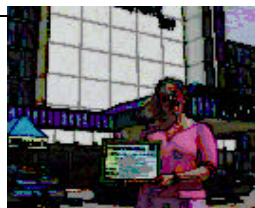
Energy Conservation

environmentaLodging is the Office of Pollution Prevention's (OPP) initiative to promote pollution prevention practices in the tourism and hospitality industry. At the end of 2003, there were 23 Virginia facilities that had received certificates from the program documenting their p2 activities. Over the year, OPP worked closely with certain facilities and focused on integrating **environmentaLodging** with Virginia's ecotourism initiative. In addition, OPP worked to plan and host a Mid-Atlantic conference on "green-lodging".

The Virginia Coastal Program, one of OPP's sister programs at DEQ, is working with the Virginia Tourism Corporation (VTC), the Virginia Ecotourism Association, and many other partners to establish a state-wide network of natural areas and trails as well as ecotour guide certification and other resources that will be supported by a host of eco-oriented businesses and events. **environmentaLodging** is a natural fit to serve the eco-minded tourist visiting Virginia to enjoy these resources. OPP is working with VTC to create links and highlights on the VTC website which indicate hotels and resorts that are part of the program.

As noted above, OPP is working with the pollution prevention programs in the other Mid-Atlantic states to present a regional conference on the topic. The conference is scheduled for February 2004 at Airlie Center in Warrenton. Airlie is in the **environmentaLodging** program and has also received E2 designation in the Virginia Environmental Excellence

Laura Seawell of the Oceanfront Inn in Virginia Beach, an *environmentaLodging* participant.



The Office of Pollution Prevention (OPP) collaborates with facilities and organizations to promote energy efficiency and renewable energy in Virginia, approaches that can reduce the environmental impact of energy use. OPP acts as a repository of information regarding renewable and alternative energy options within Virginia. Recently, the program's focus has been on wind energy, the hydrogen infrastructure, alternative fuel vehicles, landfill gas to energy/municipal solid waste to energy projects, and biofuels generated from Virginia crops.

Increasing public awareness of energy efficiency and renewable energy is done largely through outreach. OPP was an active participant in events such as Richmond's Clean Commute Day, the Association of Energy Conservation Professionals 4th Annual Energy Exposition, and the Virginia Energy Fair held at the Science Museum of Virginia.



Virginia Energy Fair
October 2003

Future efforts include participating in next year's Alternative Fuel Vehicle Day and completion of an ongoing study, funded by the Department of Energy, to identify and address barriers to distributed generation. Also, in late 2003, OPP received a grant from the Environmental Protection Agency to develop a website addressing energy efficiency and renewable energy needs. The project will increase awareness of environmental and health impacts resulting from energy use. Project goals include educating developers on the availability of renewable energy projects and informing consumers on the purchase of renewable energy.

Other Outreach Initiatives

The Office of Pollution Prevention (OPP) implements a number of other important pollution prevention and reduction initiatives, including those described below.

WasteWi\$e

In support of its environmental management system commitments to solid waste reduction, OPP is a partner member of WasteWi\$e, EPA's voluntary program for solid waste reduction. DEQ received the Honorable Mention Award for a State Government at WasteWi\$e's Annual Meeting and Awards Ceremony held on October 16 in Washington, D.C. in recognition of its solid waste reduction efforts.

Left to right: Tom Dunne, Associate Assistant Administrator for EPA's Office of Solid Waste and Emergency Response, presents DEQ's Wastewi\$e certificate to DEQ's Michael Murphy and Tom Griffin.



Mercury Reduction Projects

Over the past 4 years, OPP has worked on a series of projects related to mercury reduction. In 2003, OPP worked on two specific projects, one aimed at dentists and one focused on schools.

OPP partnered with the Virginia Dental Association (VDA) on a project that resulted in a best management practices manual entitled, "The Environmentally-Responsible Dentist". Once finalized, this manual will be distributed to the more than 2,000 dentists in the association.

For schools, OPP worked in partnership with

DEQ's Office of Environmental Education to provide access for Virginia teachers and schools to national mercury reduction training workshops. On November 14, OPP coordinated with the EPA and the University of Wisconsin Extension to provide a "Mercury in School Workshop" at the Virginia Association of Science Teachers Annual Conference in Portsmouth. In addition, DEQ promoted the November 17th web-based EPA videocast, "Mercury Reduction & Pollution Prevention in Schools" throughout the state. OPP plans to stay in contact with teachers who take these workshops and monitor their progress.

Clean Marinas

OPP serves on the the Virginia Clean Marina Program's Marina Technical Advisory Committee. The program was designed with OPP assistance so that it would incorporate p2 concepts and encourage the use of environmental management systems. Because of this design, marina facilities are afforded additional recognition and assistance opportunities through their involvement with this program.

Businesses for the Bay offers automatic membership to marina facilities who pledge to meet the goals of the Clean Marina program. For facilities that achieve full "Clean Marina" status, DEQ offers immediate designation as an "E2" facility in the Virginia Environmental Excellence Program; eighteen marinas were E2 participants at the end of 2003. Over twenty program participants are also members of Businesses for the Bay. In 2003, OPP pro-

vided assistance to eight of the designated Clean Marinas to develop p2 success stories, emphasizing their source reduction achievements.

Clean Marinas Coordinator Harrison Bresse presents certificate to Phil Geishert of Washington Sailing Marina in Alexandria at the Clean Marinas Workshop and Awards in Newport News on October 21.



Department of Defense Partnership

During 2003, OPP continued its partnership with the Department of Defense (DOD) facilities within the Commonwealth. Highlights from the year include Virginia's hosting of the EPA Region III/State/DOD Environmental Colloquium in Williamsburg in September. It attracted more than 300 participants from federal and state agencies. Topics covered included environmental regulations, emerging issues, pollution prevention and innovative approaches.

In addition to its participation in regular partnership meetings with the Virginia DOD facilities, OPP also became part of the "Virginia Regional Environmental Management System" (VREMS) program in 2003. VREMS is an innovative pilot program designed to coordinate environmental assessments conducted by a federal facility (Defense Supply Center Richmond), two local governments (the City of Richmond and Chesterfield County) and the state environmental agency (DEQ). As the first of its kind in the nation, the program seeks to facilitate the identification and successful management of the participating facilities' environmental responsibilities. It is sponsored by



the U.S. Department of Defense and the White House Council on Environmental Quality.

By sharing EMS best practices and lessons learned throughout the program, public sector organizations and community stakeholders will strengthen relationships and encourage interactive dialogue. It is expected that this program will become replicable in regions around the nation and that information gathered during this project will be available for use by other federal facilities and their stakeholders.

National Waste Minimization Partnership

As part of its efforts to promote hazardous waste minimization, in 2003 OPP worked in coordination with EPA



Region III to promote the National Waste Minimization Partnership Program (NWPP) to hazardous waste generators throughout Virginia. The NWPP focuses on reducing 30 highly-toxic priority chemicals found in hazardous waste through p2, recovery or recycling. EPA has established a goal of reducing the presence of the priority chemicals in hazardous waste by 50 percent by the year 2005 compared to amounts generated in 1991. Facilities joining the program are eligible for a number of benefits, including public recognition, use of the program logo and access to technical assistance services.

Throughout the year, DEQ hazardous waste inspectors promoted the program during their site visits. In late 2003, OPP mailed out several hundred program brochures to hazardous waste generators. Future plans include more targeted outreach to generators, including OPP site visits and facility contacts.

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