

Pollution Prevention Report 2004

Department of Environmental Quality

Office of Pollution Prevention



The Department of Environmental Quality's Office of Pollution Prevention (OPP) is a voluntary program that provides technical assistance, incentives and recognition for facilities actively involved in reducing their environmental impacts. Its primary focus is promoting the elimination and reduction of environmental impacts created by solid or hazardous waste generation, water discharges, or air emissions. In addition to providing assistance to facilities of all types, OPP operates a number of targeted outreach initiatives. Significant accomplishments of 2004 include:

- *Development and release of the Virginia Information Source for Energy website (page 1)*
- *Expansion of the Virginia Regional Environmental Management System (page 2)*
- *Significant expansion and revisions to the Virginia Environmental Excellence Program (page 3)*
- *Development and kick-off of Virginia Hospitals for a Healthy Environment (page 5);*
- *Expansion of the Environmental Lodging program (page 5);*
- *Implementation of the National Partnership for Environmental Priorities (page 6); and,*
- *Continued growth of the Businesses for the Bay program (page 7).*

DEQ looks forward to continuing its many partnerships and initiatives in the coming year, and we welcome the input and collaboration that have made their success possible.

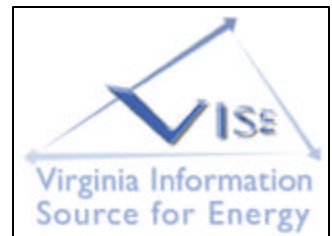
Robert G. Burnley, Director



Energy Efficiency:

Virginia Information Source for Energy (VISE) Website

Virginia and other states continue to face challenges to air quality such as ozone non-attainment, regional haze, fine particulates and toxic air pollutants. Air deposition contributes to acid precipitation as well as nutrient and toxic impacts in the Chesapeake Bay.



Increasing energy efficiency and implementing clean energy technologies are some of the most effective means of mitigating these negative impacts. In many cases, clean, renewable energy approaches provide an environmentally *and* economically preferable alternative to conventional end-of-pipe pollution control, representing a classic pollution prevention approach.

One significant barrier to implementation of these approaches can be lack of access to current and comprehensive information. To overcome that barrier, in 2004 DEQ developed a web-based resource called "VISE" or the Virginia Information Source for Energy. Unveiled in September, VISE is intended to become a tool for homeowners, business owners, facility managers and others interested in researching energy options and staying up-to-date with information and opportunities related to energy efficiency and renewable energy.

In 2003, OPP applied for and received approximately \$6,500 in funding from the Environmental Protection Agency (EPA) to develop a single, comprehensive website for information on renewable energy and energy efficiency. The goals of the project were to increase awareness of the environmental and health impacts of energy use; promote renewable energy projects in the Commonwealth; and, educate consumers about energy efficiency and renewable energy.

Whenever possible, the content of the site is specific to Virginia. For instance, VISE highlights both existing and planned renewable energy projects within the Commonwealth. Designed with input from stakeholders representing federal and state agencies, electric and gas utilities, energy technology vendors, representatives of business and industry, and non-governmental organizations, VISE will be linked to other consumer, business, educational and environmental websites serving Virginia. The web address is www.deq.virginia.gov/p2/vise.

Environmental Management Systems **Virginia Regional Environmental Management System**



The Virginia Regional Environmental Management System (VREMS) is an innovative pilot program designed to use environmental management systems (EMS) to improve communication between all levels of government in Virginia's capitol region. Through VREMS, the participating agencies use EMS to address stakeholder relationships and build partnerships to improve the environment of the greater Richmond metropolitan area.

VREMS is a multi-level partnership between a federal agency (the Defense Supply Center Richmond), the state environmental agency (DEQ) and two local governments (Chesterfield County and the City of Richmond) which provides the participants the opportunity to coordinate environmental activities from a regional perspective. It was sponsored by the U.S. Department of Defense and the White House Council on Environmental Quality (CEQ). The first program of its kind in the nation, VREMS began as a nine-month pilot in March 2003 to promote constructive communication between these different levels of government.

Initial accomplishments include:

- Improved communication channels between the partners at their different levels of government;
- The creation of a better dialogue about environmental issues with host communities, regulators, commissioners, and advisory boards;
- A greater understanding and appreciation of how each organization impacts their regional environment;
- Improved trust gained by some of the partners from their communities and stakeholders; and,
- An opportunity for participants to share EMS best practices and to leverage resources across the region.

There have also been a number of initial on-the-ground benefits for the project (summed for all partner facilities):

- Reduced fleet size by 33 vehicles (including 19 sport utility vehicles);
- Reduced vehicle miles traveled by over 450,000 miles;
- Bought 10 energy efficient vehicles;
- Reduced fuel usage and air emissions from vehicles;
- Reduced sulfur emissions from 100 tons to 7 tons;
- Set up an underground storage tank (UST) and above ground storage tank (AST) database on a GIS system for site identification;
- Removed two 1,000 gallon USTs;
- Installed two oil/water separators to catch runoff;
- Switched to an environmentally friendly parts washer;
- Installed a secure containment area for batteries;
- Labeled storm drains; and,
- Purchased environmentally-friendly "green-tip" tubes.

Environmental Management Systems **Virginia Environmental Excellence Program**

2004 marked the fourth 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 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 and other incentives. At the end of 2004, there were more than 200 facilities participating in the program, with 80% at the E2 level. Continuing the trend of the last few years, the participation level of government agencies, including federal, state and local, remains high. Half of the participating organizations (which may have more than one facility in the program) are government facilities. Similarly, governments represent one-third of all the E3 organizations in the program.

During 2004, DEQ continued its close work with both the Region III and Headquarters offices of the EPA to coordinate VEEP with the Performance Track (PT) program. 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, any Virginia facility accepted into PT will automatically be accepted into VEEP as an E3 facility, which will reduce administrative costs and increase recognition opportunities.

Significant changes to the program occurred in 2004 related to incentives, participation and administration:

- The new annual fee regulations adopted in June for waste and water permit holders include a discount for VEEP facilities at both the E2 and E3 levels.
- In June, both the Waste Management Board and the Air Pollution Control Board adopted regulatory changes that provide incentives for Virginia Performance Track facilities.

- At the end of the year, DEQ instituted new annual reporting guidelines for both E2 and E3 facilities that are intended to provide the agency with quantified performance results for reductions in waste generation, air emissions, energy use, water use, etc.

Examples of recent achievements of individual VEEP participants include:

- Reduction in boiler fuel consumption by 20%;
- Implementation of energy conservation techniques, including powering down unused computers and upgrading conventional fluorescent bulbs to "green tip" bulbs;
- Replacement of the lighting system at a local government garage, reducing energy consumption by 30%;
- Inventorying, controlling and elimination of unneeded hazardous materials throughout a local government's operations;
- Reduction of energy use by 40-50% through installation of LED traffic signal lights;
- Conversion of a print line to hazardous air pollutant-free solvents;
- Changing of a laminator process from solvent-based to water-based;
- Reduction of trim waste in a printing process resulting in reduced solid waste;
- Investigation of markets for unusable materials including trim waste, fiber drums, pallets, cardboard, metal, punctured aerosol cans, depinned propane cylinders, office paper and clear plastic; and,
- Replacement of chemical parts washers with a chemical-free hot water system by a local government garage, reducing hazardous waste generation by 1,000 pounds.

VEEP Requirements

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

- Environmental policy statement outlining the facility's commitment to improving environmental quality
- An evaluation of the facility's environmental impacts
- Objectives and targets for addressing the facility's significant environmental aspects
- Description of the facility's pollution prevention plan
- A record of sustained compliance

E3: A facility must be able to demonstrate that it possesses a fully-implemented EMS, pollution prevention program and a record of sustained environmental compliance. The EMS should include the following elements:

- Environmental policy statement
- Identification of the facility's actual or potential impacts to the environment;
- Pollution prevention program;
- Identification of the facility's environmental legal requirements;
- Description of how the facility defines, documents and maintains roles, responsibilities and authorities for its EMS;
- Procedures for reporting and record keeping for the EMS;
- Procedures for ensuring that facility employees have necessary training;
- Emergency response procedures for responding to, reporting, mitigating and reviewing incidents;
- Monitoring, investigative and corrective actions for noncompliance with the facility's EMS;
- Voluntary self assessments; and,
- Procedures to communicate with and inform external and internal audiences.

Throughout 2004, DEQ has participated in more than 15 VEEP recognition ceremonies, including ones at industrial facilities, local governments, a jail and a municipal golf course. On October 8, DEQ held a stakeholder meeting in Richmond to discuss recent and proposed changes to the program. Staff has developed a plan to increase outreach and recognition for participants in 2005, including regional workshops, emailed updates on EMS and pollution prevention information and the posting of success stories on the VEEP web page. The agency committed to expanding the scope of its incentives for VEEP and PT participants in the coming year in its Performance Partnership Agreement with EPA signed in mid-2004.

Healthcare Sector Outreach: **Virginia Hospitals for a Healthy Environment**



Virginia Hospitals for a Healthy Environment, or VH2E, is DEQ's voluntary pollution prevention initiative for all Virginia healthcare facilities. VH2E's goal is to educate healthcare professionals about the significant environmental impacts of the healthcare industry and the many prevention opportunities that are available. The program also has some specific goals: eliminate mercury, reduce waste and reduce toxicity.

VH2E was developed in support of the national *Hospitals for a Healthy Environment* effort and supports the goals of a Memorandum of Understanding signed by the American Hospital Association and EPA several years ago. In 2002, DEQ established an advisory group to consider opportunities for supporting the national effort. In November of 2003, based on the workgroup's input, the agency announced VH2E, a task-oriented version of the national program. Charter member healthcare facilities were recruited.

On September 16, VH2E held a Charter Signing Recognition Event for the initial 74 facilities that joined the program. Secretary of Natural Resources Tayloe Murphy and Secretary of Health & Human Services Jane Woods jointly presided over the event. It was hosted by Bon Secours St. Mary's Hospital in Richmond and featured speakers from participating facilities and EPA Region III. Additional healthcare facilities have joined since the event, bringing membership at the end of the year to greater than 80 facilities, which includes half of all hospitals in the Commonwealth.

A website went live in the spring of 2004 to provide on-line access to all of the guidance materials and resources. Also in late 2004, DEQ secured contractor services to provide on-site assistance to a limited number of program participants.

Lodging Sector Outreach: **Virginia Environmental Lodging Program**



Environmental Lodging is DEQ's initiative to promote pollution prevention practices in the tourism and hospitality industry. Early in the year, DEQ co-presented the EPA Region III Winter Pollution Prevention Conference entitled "Greening the Hospitality Industry: Attracting Business, Saving Money, Protecting the Environment" at the Airlie Conference Center in Warrenton. The conference was attended by over 150 participants

from all over the country, and it featured speakers and workshops on cost-saving techniques, green meeting planning, and effective green marketing.

For much of the year, DEQ focused much of its efforts on partnering with the Virginia Tourism Corporation (VTC) to redefine the role of the program within the context of state tourism. VTC began developing an initiative to promote "nature-based" tourism in Virginia in 2003. DEQ and VTC worked together to make the programs complementary. At the end of 2004, VTC assumed responsibility for marketing and promoting the environmental lodging program as part of its overall nature-based tourism effort.

During 2004, DEQ revised the "core activities" for the program. In order to be included, a facility must now implement the following:

- Optional linen service;
- Recycling opportunities;
- A water conservation plan; and,
- An energy conservation plan.

With the new coordinated program in place, VTC and DEQ have set a goal of recruiting more than 100 Environmental Lodging facilities by early 2005. DEQ intends to offer a limited amount of on-site assistance to program participants; in late 2004, the agency contracted with a non-profit organization to conduct environmental audits.

Waste Minimization: **National Partnership for Environmental Priorities**

The National Partnership for Environmental Priorities program (NPEP) encourages public and private organizations to form voluntary partnerships with states and EPA that reduce the use or release of any of the thirty-one substances that have been designated "Priority Chemicals". Through its hazardous waste management commitments with EPA, DEQ implements NPEP within Virginia.



The program, which was previously called the National Waste Minimization Program, was renamed and re-energized in 2004. EPA made the change to reflect the expansion in scope of the program to focus on the reduction in the use or release of the Priority Chemicals not only in waste generation, but also in their use in products and their release to the air or water. EPA has established a goal of reducing the amount of target chemicals by ten percent by the year 2008 (using 2001 as a baseline).

There is a recognition component to NPEP. Facilities are invited to commit to specific reductions in the use, release and disposal of the chemicals. During 2004, OPP worked to encourage participation throughout the Commonwealth. As of November, four Virginia facilities had committed to the program. Their specific commitments for reduction include:

- Reduction of hazardous waste containing methyl ethyl ketone (MEK) by 25 pounds;
- Recycling of 100 pounds of MEK;
- Recycling of over 350,000 pounds of lead previously disposed of as a hazardous waste;
- Substitution of a new solder to reduce the quantity of lead waste by 50%; and,
- Removal of over forty pounds of mercury from a hospital setting through equipment replacement.

DEQ expects that Virginia participation in NPEP will increase in 2005 as the program becomes better known as a result of OPP's outreach efforts.

Businesses for the Bay
Regional Pollution Prevention Partnership



Businesses for the Bay (B4Bay) is a regional partnership intended to improve water quality in the Chesapeake Bay watershed; facilities of all types throughout the Bay watershed are eligible for membership. B4Bay promotes the use of pollution prevention to reduce toxic and nutrient releases to the Bay. In 2004, Virginia facilities once again led the region in participation: approximately one-half of all members (279 out of 603) are in Virginia, almost twice as many as the next closest state. For 2003, Virginia facilities in the program reported the following results: 167,700 tons waste reduced and \$13.4 million saved. In October, fourteen Virginia-based entities received Businesses for the Bay Excellence Awards. They were recognized for their pollution prevention efforts to conserve water and reduce toxic and nutrient releases. Earlier in the year, OPP developed a B4Bay website specific to Virginia to promote participation and recognize members' achievements: www.deq.virginia.gov/p2/b4b/homepage.html.

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Office of Pollution Prevention Websites:

General Information	www.deq.virginia.gov/p2
Virginia Information Source for Energy	www.deq.virginia.gov/p2/vise
Virginia Environmental Excellence Program	www.deq.virginia.gov/veep
Virginia Hospitals for a Healthy Environment	www.deq.virginia.gov/p2/vh2e
Businesses for the Bay	www.deq.virginia.gov/p2/b4b/
National Partnership for Environmental Priorities	www.deq.virginia.gov/p2/wastemin.html
Environmental Lodging	www.deq.virginia.gov/p2/lodging/

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