



P₂ NEWS

2nd Half 2002

2001 P2 Winners Hail From Peninsula

Bioreactor/leachate recirculation. Hazardous waste reduction. Chlorine process solvent reuse. These are just some of the accomplishments of the 2001 pollution prevention (P2) award winners, all of which are businesses located on the Peninsula.

Those accepting P2 awards are (from l to r) Frank Ottofaro (Catalina Cylinders), Michelle Fraser (NASA), Amy Cheatham (Newport News Shipbuilding), and Monty Heuring (Canon). Not shown: Universal Laboratories and Waste Management.

The six P2 award winners are joined by 101 gold pretreatment excellence and 46 silver pretreatment excellence award winners. Pretreatment excellence awards are presented for exemplary permit compliance, and P2 awards are presented for outstanding pollution prevention measures.

Recipients were honored at a ceremony on May 8 in Virginia Beach, marking the 5th annual recognition for P2 award winners and the 9th for pretreatment excellence award winners. Pretreatment excellence award winners receive an engraved plaque, and P2 award winners

receive an engraved acrylic trophy and are also named in a full-page ad in the *Daily Press* and *The Virginian-Pilot*. Honoring businesses for their superior efforts provides deserved recognition and an incentive to prevent pollution beyond environmental regulations.

P2 awards are presented to businesses for outstanding multi-media (air, land, water) P2 efforts that focus on reduction of waste (or its toxicity) at the source rather than traditional treatment, control, and disposal. Some examples include raw material substitution, installation of clean manufacturing technologies, in-process recycling, as well as preventive maintenance and spill prevention. The 2001 P2 award winners are:

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FEATURED INDUSTRIES: P2 AWARD WINNERS

Canon Virginia, Inc., Newport News

Installed a system to recover and reuse chlorine process solvents, reducing the discharge to HRSD's system from 6,000 gallons per month to 800 gallons. The recovery system removes chlorinated solvents from two process rooms at the factory using activated carbon adsorption beds to filter the air and vapor.

Catalina Cylinders, Hampton

Reduced hazardous waste generated from twelve 55-gallon drums per month to four 55-gallon drums, as a result of a process change for highly caustic aluminum etchant tanks. Also reused 100,000 gallons per month (about 40 percent) of their process water.

NASA, Langley Research Center, Hampton

Focused efforts on mercury: recycled mercury thermometers and standard fluorescent bulbs and installed new low-mercury fluorescent bulbs. Fluorescent light bulbs were crushed in a self-contained unit, capturing the mercury for offsite recycling.

Newport News Shipbuilding & Dry Dock Company (Northrop Grumman), Newport News

Implemented a program for process review and product substitutions. Two of the most significant substitutions were the less hazardous propylene glycol for ethylene glycol and a commercially available parts cleaner for a hazardous 1,1,1,-trichloroethane cleaner. Also replaced conventional paint with a powder coating for parts, reducing paint waste by more than 13 tons.

Universal Laboratories, Hampton

Replaced hazardous chemicals used in analyses with nonhazardous products, eliminating freon™, mercury, acetone, and acidic wastes. Initiatives resulted in DEQ reclassifying the lab from a small-quantity hazardous waste generator to a conditionally exempt small-quantity generator.

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Penalty Fund Boosts Shad, Underwater Grasses, And Environmental Education

Hampton Roads Sanitation District has awarded three grants totaling \$21,000 to the Virginia Institute of Marine Science (VIMS) for their submerged aquatic vegetation program (\$10,000), the Virginia Living Museum for environmental education (\$10,000), and the Mattaponi Heritage Foundation for American shad restoration and water quality monitoring (\$1,000). In addition, an environmental scholarship (\$3,000) has been awarded to a graduate student in Hampton Roads.

The scholarship and grants are funded by administrative penalties levied against businesses and industries that fail to meet their permit requirements. To ensure permit compliance, HRSD makes frequent unannounced visits to facilities as well as scheduled inspections that more closely examine operations. Collected penalty monies are returned to the community through support of environmental education and outreach projects.

The grant to VIMS will be used to conduct research and map regional coastal sea grass beds, building on two decades of previous research in eelgrass biology and ecology. Underwater grasses provide critical habitat for juvenile fish and crabs and improve water quality by filtering pollutants. VIMS hopes to link habitat to water quality as part of their program. Underwater grasses are estimated to be at just 12

percent of historic levels (Chesapeake Bay Foundation). The VIMS School of Marine Science, a graduate school of the College of William and Mary, is located in Gloucester Point on the York River.

The Virginia Living Museum of Newport News will apply its grant toward a new educational center as part of capital improvements to

Collected penalty monies are returned to the community through support of environmental education and outreach projects.

expand the museum. The current educational center is over 30 years old and serves 130,000 students annually, providing SOL-correlated science programs. Due to limited space, the museum cannot accommodate the additional 30,000 students who request use of their facilities. The expansion will triple the size of the building and exhibits and offer visitors a complete picture of Virginia's natural heritage – animal, bird, and plant habitats from the ocean to the mountains.

HRSD also partnered with the museum to help develop Safari Golf, which was the only educational miniature golf course in Virginia. HRSD sponsored the Wastewater Watch hole, where the golf ball simulated wastewater flowing down a drain and the hole (which featured a flushing sound) was placed within a toilet seat. Safari Golf was discontinued to allow for the expansion.

The Mattaponi Heritage Foundation grant will provide laboratory chemicals for one year, supporting the Mattaponi shad hatchery located near West Point. The laboratory is used to monitor the health of the Mattaponi River year-round. Weekly tests are conducted for turbidity, pH, dissolved oxygen, and salinity. Data will be used to study the river's ecology and help determine the factors that contribute to the shad's survival. Since the hatchery began operation two years ago, more than 12 million fry have been released into the Mattaponi River.

In 1994, a Baywide moratorium was established on American shad. Since then, the Mattaponi Tribe has partnered with federal and state agencies and others to develop the American Shad Restoration Program, promoting recovery of populations in the Mattaponi, Pamunkey, and James river systems.

The Norfolk Foundation selected Tara Welch as the recipient of the HRSD environmental scholarship for the 2002-03 academic year. Tara graduated this May from Old Dominion University with a B. S. in civil engineering and a specialization in hydraulics and a minor in environmental engineering. She will begin her graduate studies in environmental engineering in the fall and expects to graduate in May 2003. Tara is a resident of Portsmouth and attended Woodrow Wilson High School.

To qualify for the scholarship, applicants must permanently reside within HRSD's service area of 17 cities and counties in southeast Virginia. Also, an applicant must be a full-time graduate student in a public Virginia university enrolled in one of the follow-



Tara Welch, a Portsmouth resident, was selected as the HRSD environmental scholarship recipient. Tara will begin her graduate studies in environmental engineering in the fall and expects to graduate in May 2003.

ing disciplines: environmental health, environmental chemistry, biology, or civil or environmental engineering. HRSD employees and commissioners and their relatives are not eligible.

The HRSD environmental scholarship fund is administered by the Norfolk Foundation, a community trust established in 1950 to distribute charitable funds. The permanent, perpetual fund provides one scholarship each year.

"As pleased as we are to make the awards, we would prefer not to issue administrative penalties," comments Guy Aydlett, Director of Water Quality. "One day, we hope the penalty fund dries up. This will signal that businesses and industries are meeting their permit requirements and are doing right by the environment."

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Waste Management Disposal Services of Virginia, Inc., Glens

Installed a bioreactor/leachate recirculation system at the Middle Peninsula landfill, eliminating their discharge of 250,000 gallons per month to HRSD's system. This extended landfill life, improved methane management, and accelerated waste stabilization so the landfill can meet other useful purposes sooner, with greater safety.

Other Noteworthy P2 Award Applications

Our congratulations to all HRSD P2 award winners for 2001. Other impressive applications were also submitted by:

- Anheuser-Busch, Inc., Williamsburg
- Flowserve US Inc., Chesapeake
- Iceland Seafood Corporation, Newport News
- Lifetouch National School Studios, Inc., Chesapeake
- Smithfield Foods, Inc., Smithfield
- U. S. Navy, Sewells Point Complex, Norfolk

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Award Winners

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Significant Industrial Users:

- **Newport News Shipbuilding & Dry Dock Company**, Newport News (>400,000 gallons per day)
- No nominees in the 50,000-400,000 gallons-per-day category
- **Catalina Cylinders**, Hampton (<50,000 gallons per day)

Nonsignificant Industrial Users:

- **NASA, Langley Research Center**, Hampton (>25,000 gallons per day)
- **Canon Virginia, Inc.**, Newport News (10,000-25,000 gallons per day)
- **Universal Laboratories**, Hampton (1,000-9,999 gallons per day)
- **Waste Management Disposal Services of Virginia, Inc.**, Glenss (<1,000 gallons per day)

Gold pretreatment excellence awards are presented to businesses that have a perfect compliance record, with no administrative or technical violations. Silver pretreatment excellence awards are presented to large businesses (those with a process discharge flow of 25,000 gallons per day or more) with three or fewer such violations and to small businesses (those with a process discharge flow of less than 25,000 gallons per day) with one such violation.

To protect the environment and our facilities, HRSD issues permits and monitors wastewater discharged from businesses and industries. These businesses pretreat their industrial wastewater before discharging it to HRSD's system. Their efforts help protect our waterways and other natural resources. The U. S. Environmental Protection Agency recognizes HRSD's pretreatment program as one of the nation's best.

E-Alert: Silver Dischargers

Over the coming months, HRSD's Industrial Waste Division plans to establish best management practices (BMPs) for silver dischargers. The BMPs will be modeled after the *Code of Management Practices for Silver Dischargers* (Silver CMP), developed by the Association of Metropolitan Sewerage Agencies (AMSA) and The Silver Council to target discharges of silver from image processes (e.g., photos, X-rays).

The Silver CMP is an EPA-recognized program of BMPs designed to help wastewater treatment utilities reduce silver loadings to their headworks, with only a minimum investment of resources. HRSD, The Silver Council, and Photo Marketing Association International recently developed an implementation kit with the necessary information and planning tools for wastewater treatment utilities.

HRSD's BMPs will be an alternative to the traditional numerical discharge limits for controlling silver discharges and will become an enforceable element of HRSD's pretreatment program. With representatives of The Silver Council, HRSD plans to hold the first of a series of BMP workshops for silver dischargers this fall, with enforcement of the silver BMPs anticipated in 2003. Some of the advantages of the silver BMPs include:

- Encourages collaboration between HRSD and the silver industry, rather than a strict command-and-control approach.
- Maximizes the amount of silver recovered, which in many cases will provide economic benefits for the silver discharger.
- Recognizes the differences between small, medium, and large dischargers and the impacts they will have on HRSD.

For more information about HRSD's silver BMPs, contact Debbie Crofford at (757) 460-7050 (Virginia Beach) or Ed Hartman at (757) 833-1751 (Newport News).



Established in 1970, AMSA is a national trade association representing over 270 of the nation's public wastewater utilities that collectively treat and reclaim more than 17 billion gallons of wastewater daily. The Silver Council is an organization that develops and promotes environmentally sound and equitable methods of handling silver resulting from photographic processes. Photo Marketing Association International represents over 18,000 members in more than 100 countries who are involved in the processing, service, or retail marketing of the photo/imaging industry.

DEQ's Water Programs Director On What's New At DEQ

As the guest speaker for the awards ceremony, Larry G. Lawson, P.E. (DEQ's Director, Division of Water Programs), shared updates on the Virginia General Assembly, water regulations, and future DEQ activities. In his position with DEQ, Lawson oversees the offices of Water Permit Support, Water Quality Programs, Operator Training and Assistance, Water Resources Management, Construction Assistance, and Spill Response and Remediation.

The Virginia General Assembly recently passed a bill authorizing the State Water Control Board to amend the permit fee schedules, as well as triple the statutory caps on water permit fees. For example, the current permit fee for a VPDES industrial major discharger is \$8,000, and the revised fee is \$24,000. VPDES municipal major dischargers such as HRSD will now pay \$21,300. Fees are paid when the permit is renewed.

Several water quality standards were recently amended. The amendments update the statewide bacteria criteria to match updates published by EPA. The bacteria criteria are designed to protect all state waters for primary contact (recreational swimming). The water quality standard for fecal coliform has been changed to standards for *E. coli* in freshwater and enterococci in saltwater. These amendments will be used in calculating VPDES permit limits, where appropriate, and for water quality assessments.

On a related note, several VPDES general permits are under DEQ review, including those for car washes, petroleum, cooling water, construction, and small MS4s (municipal separate storm sewer systems).

The 2000 Virginia General Assembly passed a bill that requires the State Water Control Board to promote and establish



requirements for wastewater reclamation and reuse. A recent regulation has been proposed to authorize DEQ to uphold these requirements as an alternative to directly discharging into state waters, when protective of these waters and public health. The public has been invited to comment on the proposed regulation.

As the new Director of DEQ, Bob Burnley has several priorities for the next few years. Among them are pollution prevention, strengthening the protection of the Chesapeake Bay and coastal zone, the designation of exceptional waters, and decision making based on good science.

Pollution prevention remains the first step in addressing many environmental issues. The results of the latest Toxics Release Inventory indicate that emissions continue to decline. DEQ is faced with the challenge of reducing the generation of waste and improving

the quality of life in the Commonwealth.

The Chesapeake Bay and our coastal zone are vital components of the agency's environmental protection responsibilities. DEQ will work closely with all the Chesapeake Bay Program and coastal zone partners to strengthen efforts to protect these valuable resources.

For more than a decade, DEQ has had the authority to provide special protection to deserving streams, yet only one small section of one small stream is designated as exceptional. DEQ will review the designation of exceptional waters in Virginia.

DEQ is emphasizing the importance of good data in decision-making processes. The agency will use good science to make decisions, combined with good judgment, common sense, and stakeholder input.

Burnley emphasizes that achieving these priorities will take innovation, creativity, unconventional solutions, and stakeholder input and assistance. As stakeholders, businesses, industries, and government together play a vital role in achieving Virginia's goal: clean water.



Ask Enviro-Eddie

Dear Enviro-Eddie,

My company is seeking ISO 14000 certification, and I noticed that the guidance document ISO 14001 barely mentions pollution prevention. When it does, it refers to it in terms such as recycling, treatment, and process controls. The pollution prevention hierarchy you provided in previous articles said we should prevent, recycle, treat, and release, in that order. Which is correct?

ISO Confused

Dear ISO Confused,

You are very perceptive. Actually, ISO 14001 uses the phrase “prevention of pollution.” ISO 14001 is an environmental management system (EMS) developed by standards-setting organizations from 100 countries. The standard provides a general framework for organizing

tasks necessary for effective environmental management. Simply stated, the standard makes you examine your existing organization and effectively manage all aspects to ensure a business remains in compliance and does not pollute the environment.

ISO 14001, however, is not a “performance standard.” There are no specific requirements for improved environmental performance. It does, however, require you to identify environmental impacts, prioritize them, and set goals and objectives for reducing those impacts. That’s where the “pollution prevention” hierarchy identified in the Pollution Prevention Act of 1990 (prevent, recycle, treat, release) enters the picture.



Many companies have used innovative pollution prevention techniques to actually improve their environmental performance. Don’t let the lack of a performance standard in the ISO 14001 keep you from developing and setting some goals for improvement (e.g., a 50 percent reduction in air emissions or the replacement of organic-based cleaners with aqueous cleaners). Many companies who are ISO 14000 certified also find their names on the list of companies that have won awards for pollution prevention accomplishments.

So, there is no incorrect answer. One program does not exclude the other. Good luck on your certification request!

Enviro-Eddie

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