

P3News

2nd Half 2004

PRETREATMENT & POLLUTION PREVENTION

INSIDE

Featured Facilities:
P2 Award Winners 2

Preemptive Permit
Compliance 3

HRSD Environmental
Improvement Fund Grants 4

Tips For Waste Haulers 5

Meeting Permit Deadlines 6

EPA Regulatory Enforcement 7

FYI: Pretreatment Regulations 7

HRSD, Elizabeth River Project Honor Businesses, Industries

Annual Environmental Awards Ceremony Recognizes "Green" Facilities

The Elizabeth River Project joined HRSD in recognizing 146 facilities for pretreatment excellence and three facilities for pollution prevention (P2) measures in 2003. During the April 28 ceremony, Marjorie Mayfield Jackson (Elizabeth River Project Executive Director) and Princess Elizabeth (Robin Dunbar) gave a tea toast to award winners, many of whom are River Stars.

As environmental stewards, River Stars prevent pollution and restore habitat "to do right by the river."

HRSD, a model-level River Star, achieved this highest level of recognition in 1999.

Our pretreatment program was key to meeting model-level status. The U. S. Environmental Protection Agency (EPA) considers our program to be one of the nation's best.

Of the 146 facilities honored, five received platinum pretreatment excellence awards for perfect permit

compliance for the consecutive years 1999-2003:

- Bennette Paint Manufacturing Company, Inc.
- Box USA Group, Inc.
- Shorewood Packaging Corporation
- The Virginian-Pilot, Greenwich Facility
- Yorktown Power Station

Gold pretreatment excellence awards were presented to 92 facilities that had perfect permit compliance in 2003. Forty-nine facilities were honored with silver pretreatment excellence awards for few permit violations in 2003.

Three facilities took the initiative to "go above and beyond" permit requirements to win P2 awards:

- U. S. Coast Guard, Department of Homeland Security, Integrated Support Command
- U. S. Navy, Naval Station Norfolk, Sewells Point Complex
- Shorewood Packaging Corporation



Marjorie Mayfield Jackson (Elizabeth River Project Executive Director), Bill Pierce (HRSD Commission Chair), and Princess Elizabeth (Robin Dunbar)

continued on page 8



U. S. Coast Guard Integrated Support Command staff with Craig Forbes (HRSD Water Quality Supervising Specialist, left center)



U. S. Navy Sewells Point Complex staff with Matthew Cox (HRSD Industrial Waste Manager, second from left)



Shorewood Packaging Corporation staff with Ed Hartman (HRSD Water Quality Supervising Specialist, far right)

Featured Facilities P2 Award Winners

U. S. Coast Guard, Department of Homeland Security, Integrated Support Command, Portsmouth

The U. S. Coast Guard Integrated Support Command significantly reduced paint wastes by using new cleaning procedures and developing a system to recycle paint solvents. Cutting paint wastes from 2,300 pounds per year to just 300 pounds saved more than \$1,000 annually in disposal costs. Other reuse programs for antifreeze and oil saved more than \$3,000. Changing to digital x-ray equipment eliminated an additional 120 pounds of silver from the hazardous waste stream.

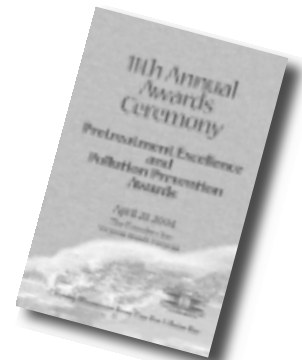
U. S. Navy, Naval Station Norfolk, Sewells Point Complex

The P2 initiatives of the U. S. Navy Sewells Point Complex resulted in savings of more than \$2 million. They included:

- Implementing an oily waste recycling program that allowed reuse of an estimated 3 million gallons of oil.
- Changing to aqueous parts washers.
- Using high-volume, low-pressure paint spray guns.
- Switching to microbial washing of shop towels on submarines.

Shorewood Packaging Corporation, Newport News

Shorewood Packaging Corporation, which prints paperboard boxes and blister cards, eliminated the toluene waste stream and air emissions by changing blister card coatings. This resulted in an annual savings of \$153,800.



Preemptive Permit Compliance

Contributor: Matthew Cox, Industrial Waste Manager

We've all heard the phrase "It's like trying to find a needle in a haystack." Many industrial users often share this sentiment when determining the actual source of Industrial Wastewater Discharge Permit noncompliance. Most analytical reports take several weeks to generate, followed by administrative

procedures that also increase the time between the actual

sources can be identified and addressed well in advance. All industrial users should perform site assessments to determine potential sources of permit noncompliance. Useful tools in this assessment are the facility's Industrial Wastewater Discharge Permit, Industrial Wastewater Discharge Regulations, all permit-related analytical data, and a properly completed Industrial

Wastewater Discharge Permit Application.

The following potential problem areas and associated preemptive measures should be considered:

What are the pollutants of concern?

HRSD's regulated pollutants are specified in the facility's Industrial Wastewater Discharge Permit, the Industrial Wastewater Discharge Regulations, and the Industrial Wastewater Discharge Permit Application. Make sure that the pollutants of concern are known, even if they are not currently identified as a source of regulatory noncompliance.

Which raw materials, chemicals, finished products, plant equipment, or by-products are the actual or potential sources of these pollutants?

The facility Material Safety Data Sheet (MSDS) binder is a good place to start, but all pollutants of concern may not be listed on the MSDS. The chemical manufacturer should be consulted to provide the actual concentration of pollutants of concern for all chemicals used at the facility. Not all pollutants are

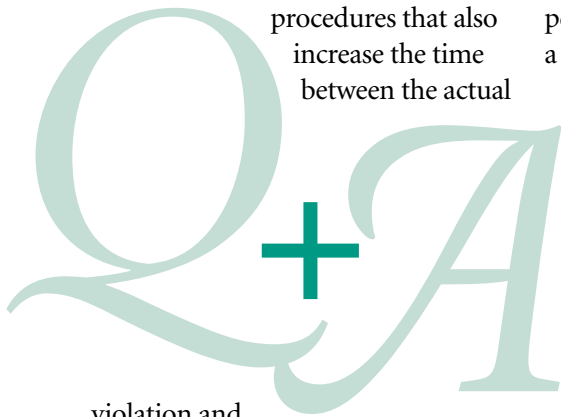
associated with the chemicals used at the plant. Plant equipment that contacts waste streams may also be the source of various pollutants.

Do the wastes identified as containing pollutants of concern routinely contact the industrial waste stream, or could they only enter the sanitary sewer through spill, mishap, or improper discharge?

Wastes that are discharged to the sanitary sewer must receive the appropriate level of pretreatment to ensure compliance. Monitoring data should be carefully reviewed to determine if pollutant concentrations are trending upward. Pretreatment system enhancements may be required to ensure acceptable concentrations of all pollutants of concern to avoid noncompliance. Better yet, by switching to "greener" alternatives, some pollutants can be eliminated altogether. Analytical field-testing kits may be useful when attempting to determine pollutant sources within the plant.

Chemicals should be prevented from entering the sanitary sewer through spill, mishap, or improper discharge. Do not wait for an incident to occur. Relocate or place chemicals within containment, seal floor drains, and remove overflow lines. Staff should be properly trained in spill recovery and HRSD discharge prohibition requirements. Contingency planning based on predicted spill outcomes is a must, as is routine inspection of chemical use and storage areas.

continued on page 5



violation and the industrial user's receipt of the Notice of Violation (NOV).

Notifications of monthly average exceedances take even longer to generate. After notification of the violation, the industrial user must then backtrack through logs, production records, waste receipts, pretreatment system records, cleaning activities, and contractor activities or investigate any number of other occurrences that may have caused the noncompliance. If the source of the violation remains undetermined, the result can be repeated noncompliance and possibly the assessment of an administrative penalty (i.e., fine).

What can the industry do in advance? Another adage comes to mind: "Prior planning prevents poor performance." On reflection, the vast majority of potential violation

HRSD Environmental Improvement Fund Provides Community Grants

The Virginia Living Museum and Portsmouth Public Library Foundation have been awarded grants of \$10,000 and \$850, respectively. The HRSD environmental improvement fund (formerly the penalty fund) provides grants to government entities, nonprofit organizations, and educational institutions for environmental education and water quality improvement projects. Since the fund was implemented in 1998, HRSD has contributed more than \$179,000 to Hampton Roads communities.

On March 28 the Virginia Living Museum opened its doors to the new

exhibition building, which more than triples the former exhibit space. New, live exhibits showcase Virginia's natural history from the mountains to the sea. The new Coastal Plain Gallery, one of four, explores the rich nursery of the Chesapeake Bay. The grant funded the exhibit of the blue crab, one of several Bay region creatures featured in this gallery.

The Portsmouth Public Library Foundation is purchasing books to support the environmental science curriculum for elementary school students. Each branch receives one copy of a variety of titles. Many of the library system's 50,000 registered borrowers are children who do not

have access to books at home. These resources assist students with project and report preparation and stimulate curious young minds.



Toykea Jones, HRSD environmental scholarship recipient

In addition to the grants, HRSD also awards an annual environmental scholarship to a graduate student in Hampton Roads. Toykea Jones has been named the

recipient for the 2004-2005 academic year. She is using the \$3,000 scholarship to pursue an M.S. degree in environmental engineering at Old Dominion University, where she graduated in 2003 with a B.S. degree in chemistry. As a community trust, the Norfolk Foundation administers the HRSD environmental scholarship fund as well as other charitable funds.

The scholarship and grants are funded by fines collected from facilities that do not meet their permit limits for industrial wastewater discharges. To ensure permit compliance, IWD staff members make 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 projects that promote environmental education or improve water quality.

Blue crab exhibit, Virginia Living Museum



Tips For Waste Haulers

Contributor: Debbie Crofford, Industrial Waste Specialist

Most wastewater treated at an HRSD plant is first transported through a vast system of pipes and pump stations. However, HRSD also routinely accepts the discharge of hauled wastewater at several of our treatment plants. The haulers transporting these wastes are issued Indirect Wastewater Discharge Permits and are regulated under guidelines applicable to their HRSD operation. These guidelines include policies for types of wastes hauled, proper procedures for discharging at HRSD plants, and accurate tank volume determination.

Types Of Wastes

Indirect hauling companies are permitted for the transport of residential septage, food service grease trap wastes, portable toilet wastes, shipboard domestic wastes, as well as municipal and private pump station wastes. Any other waste types must receive prior approval from the Industrial Waste Division (IWD). Industrial and commercial wastes, other than those from food service grease traps, are not accepted at HRSD's indirect discharge sites.

Proper Procedures For Discharging

Upon arrival at the treatment plant, the hauler must first report to the plant office, or designated area,

to complete an Indirect Discharge Form. The form requires information such as the company name, vehicle identification, tank volume being discharged, and the type of waste being discharged. HRSD



A waste hauler discharges at our Nansemond Treatment Plant (Suffolk).

personnel periodically verify the tank volume for accuracy. Once an HRSD employee signs the Indirect Discharge Form, the driver may proceed to the designated area. After each visit, the discharge pad must be thoroughly cleaned before leaving the site.

Accurate Tank Volume Determination

Trucks are equipped with either a sight glass or sight bubbles to determine tank volumes. Waste haulers may add as many sight bubbles as they deem necessary to determine tank volumes. However, the volume must be marked on each tank. IWD inspectors calculate tank volumes during the initial permitting process or after a new sight glass or sight bubbles are added. The inspector-calculated volume is provided to the permittee, who must permanently affix this volume at the appropriate locations on the truck tank. Because billing is based on volume, haulers must follow HRSD policies for accurate reporting.

The sight glass allows a direct reading of the volume, but readings

based on sight bubbles must be determined. If the fluid level indicates a completely filled sight bubble, billing is based on the next highest bubble or full tank volume, as appropriate. Full-tank billing for each load is also an option once your IWD inspector has been notified and the appropriate procedures followed.

Compliance

continued from page 3

Are any changes planned within the plant or plant production processes?

Changes to process raw materials, or reformulated chemicals that may be introduced into the facility's discharge, often result in effluent problems. Any changes to raw materials or chemicals must receive approval from HRSD prior to discharge. Permit compliance staff must work closely with procurement and process engineering staff to ensure that any new pollutants will be compatible with the existing pretreatment system. The need for pretreatment system modifications or enhancements must be assessed and implemented before an increase in production, the addition of new lines, or the addition of any new industrial wastewater contribution.

By taking these proactive steps, industrial users can minimize the potential for future noncompliance. It may be a trite expression, but even in pretreatment, "An ounce of prevention is worth a pound of cure."

Meeting Permit Deadlines

Contributor: Steve Hawthorne, Water Quality Specialist

Your facility may be regulated by permits with deadlines that guide your operations and work processes. Your HRSD Industrial Wastewater Discharge Permit is no exception. Meeting HRSD permit deadlines helps prevent administrative violations. Missed deadlines can cause major problems for you and your facility, including:

- Receipt of an NOV and other possible enforcement actions.
- Increased responsibilities and workload in response to the NOV.
- Being accountable to an angry supervisor or owner.
- Possible disqualification from receiving an HRSD pretreatment excellence award.

Here are some HRSD permit conditions with associated deadlines and goals for meeting them. Please contact your IWD inspector if you have any questions regarding your facility's permit conditions.

<p>Self-Monitoring Data Submittal (non-organics)</p> <p>Flow Meter Readings</p> <p>Indirect Discharger Monthly Report</p>	<p>All non-organics data must be received by the 10th of the following month (advance due date). Submitting data by fax is acceptable for meeting this deadline. All original data and an appropriately executed certification statement must be received within 30 days of the advance due date.</p> <p><i>Goal: Ensure that data are faxed by the 5th of the following month to meet the advance due date. Attach the data to an appropriately executed certification statement and mail immediately.</i></p>
<p>Self-Monitoring Data Submittal (organics)</p>	<p>All organics data must be received within 30 days of sampling or by the 10th of the following month (advance due date), whichever date is later. Submitting data by fax is acceptable for meeting this deadline. All original data and an appropriately executed certification statement must be received within 30 days of the advance due date.</p> <p><i>Goal: Ensure that data are faxed by the 5th of the following month or 25 days after sampling (whichever date is later) to meet the advance due date. Attach the data to an appropriately executed certification statement and mail immediately.</i></p>
<p>Semi-Annual Sampling Frequency</p>	<p>Sampling should be conducted in varying months: The first sample should be collected between January and June, and the second sample should be collected between July and December of each calendar year.</p> <p><i>Goal: Schedule sample collection for January and July the first year the permit is issued. Sample in February and August the next year, March and September the third year, and so on. When sampling in June or December, schedule collection early in the month.</i></p>
<p>Meter Certification</p>	<p>Applicable meters must be certified (calibrated) as accurate to manufacturer's specifications annually. A copy of the meter certification (calibration) and an appropriately executed certification statement must be received by December 31 each year.</p> <p><i>Goal: Schedule meter calibration no later than October and submit (by fax and mail) required documents as stated in your permit.</i></p>
<p>Violated Parameter Resampling and Analysis</p>	<p>Any self-monitored parameter in violation must be resampled and analyzed within 30 days of being notified of the violation.</p> <p><i>Goal: If a violation of a self-monitoring parameter occurs, take steps to ensure future compliance. A sample must be collected within 30 days of the Permittee being notified of the violation. The sample results must be submitted according to self-monitoring requirements.</i></p>

EPA Regulatory Enforcement Action

Virginia Wastewater Treatment Operators Imprisoned for Violating the Clean Water Act

Contributor: Ed Hartman, Water Quality Specialist

According to news reports, Alexander Lapteff and Kenneth Hinkley have been sentenced for criminal violations of the Clean Water Act. The defendants improperly operated and maintained the Christchurch School wastewater treatment plant, which resulted in the facility discharging sludge and chlorine into a Rappahannock River tributary. Christchurch School had hired Hinkley's company (Analytech, Inc.), a wastewater treatment contract, operations, and laboratory analysis firm.

U. S. District Judge Hudson admonished Lapteff, who holds a Ph.D. in chemical engineering, for being a "rogue" operator who breached his trust to protect the environment. Lapteff was sentenced to 36 months in prison, a \$5,000 fine, and one year of supervised release. In addition, he had to surrender his Class I Virginia wastewater works operator's license and has agreed not to own or operate any facility in the future, among other occupational restrictions.

The judge deemed Hinkley, the company owner, as "less culpable." Hinkley was sentenced to 11 months in prison, a \$5,000 fine, one year of supervised release, and 50 hours of community service. He also agreed to surrender his Class I Virginia wastewater works operator's license and agreed to similar occupational restrictions imposed on Lapteff.

As a result of the three-day trial, a federal jury found Lapteff and Hinkley guilty of such charges as making false entries in the facility's log book, making false statements in monthly discharge monitoring

reports submitted to the Virginia Department of Environmental Quality (DEQ), and taking and withholding the facility's monitoring records. The case was investigated by the EPA Criminal Investigation Division, Federal Bureau of Investigation, and DEQ and was prosecuted by the U. S. Attorney's Office in Richmond.

Sources:

www.usdoj.gov/usao/vae (Archive October 2003 Press Releases)

www.epa.gov/region03/news.htm (News Releases October 2003)

FYI: Pretreatment Regulations

Effluent guidelines recently adopted, revised, or being developed:

<u>Category</u>	<u>Federal Register Date or Deadline for Proposal</u>	<u>Final Action Date</u>
Aquatic animal production	9/12/02	6/30/04
Pulp, paper, and paperboard (dissolving kraft [Subpart A] and dissolving sulfite [Subpart D])	12/17/93	9/04

Dates of interest for newly finalized categorical effluent limitations:

<u>Category</u>	<u>Implementation Date</u>
Transportation and equipment cleaning	8/14/03
Centralized waste treatment (CWT)	12/22/03
Meat and poultry products	2/26/07 (direct dischargers only)
Construction and development	No effluent guidelines established
Concentrated animal feeding operations (poultry, swine, beef, and dairy subcategories)	12/31/06
Metal products and machinery	Upon issuance of NPDES permit (direct dischargers only)

Other EPA initiatives under review:

Pretreatment Streamlining Rule	Projected final 12/04
Revised analytical test methods	Comments received 6/7/04
ISCORS assessment of radioactivity in sewage sludge	Review of comments continuing
Effluent Guidelines Rule (304 m)	Comments received 3/18/04

For more information about pretreatment regulations, please contact Bernie Strohmeyer, Industrial Waste Manager, at bstrohmeyer@hrsdc.com or (757) 460-7042.

Awards

continued from page 1

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

To protect the environment and our system, HRSD issues permits and monitors wastewater discharged from businesses and industries. These facilities first pretreat their industrial wastewater, which helps

protect our waterways and other natural resources. The annual awards program is funded by fines collected from facilities that do not meet their permit limits for industrial wastewater discharges.



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