

Pollution Prevention News

FEATURE ARTICLE

Pollution Prevention & Environmental Security

So just what is environmental security? Environmental security is a “catch all” phrase that can encompass a variety of security measures, including:

- the physical security of the facility site
- employee security
- internet security of facility information
- chemical security
- process security

All businesses, institutions, and public facilities can initiate a variety of relatively simple steps, involving pollution prevention techniques, to prevent accidents and criminal activity. The following are a few suggestions:

- implement pollution prevention measures to eliminate or reduce hazardous chemicals, wastes, and processes
 - evaluate innovative equipment and process design, particularly those that reduce the need for using hazardous materials and that minimize the generation of hazardous waste
 - utilize environmental management systems to keep employees trained and involved in environmental compliance
 - evaluate the design, location, accessibility, security levels, protocols, hours of operation, and age of the facility



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THE NORTHEAST WASTE MANAGEMENT OFFICIALS' ASSOCIATION (NEWMOA)

NEWMOA is a non-profit, non-partisan interstate governmental association. The membership is composed of state environmental agency directors of the pollution prevention, hazardous and solid waste, and waste site cleanup programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont.

NEWMOA's mission is to help states articulate, promote, and implement economically sound regional programs for the enhancement of environmental protection. The group fulfills this mission by providing a variety of support services that facilitate communications and cooperation among member states and between states and EPA.

NEWMOA's P2 program was established in 1989 to enhance the capabilities of the state and local environmental officials in the northeast to implement effective source reduction programs. The program is called the Northeast States Pollution Prevention Roundtable (NE P2 Roundtable). This program involves the following components:

- NE P2 Roundtable meetings and workgroups
- Regional P2 information resource center and databases of information
- Source reduction research and publications
- Training sessions
- Regional policy coordination and development.

For more information contact:

Terri Goldberg, NEWMOA, (617) 367-8558 x302, tgoldberg@newmoa.org, website - www.newmoa.org.

Pollution Prevention and Environmental Security

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- evaluate the security of the site information that is available on the Internet
- communicate to employees the importance of site security
- develop and maintain an emergency response plan and keep it active

These steps and others can help minimize crime, prevent environmental and public health harm, and protect company assets.

(Adapted from the "Environmental Security for Small Business" brochure that was recently published by the National Pollution Prevention Roundtable Small Business Workgroup)

Results of Recent GAO Report on Security at Chemical Facilities

Recently the General Accounting Office (GAO) released a report, "Voluntary Initiatives are Under Way at Chemical Facilities but the Extent of Security Preparedness is Unknown" that evaluates the security efforts at chemical facilities. According to the report, "federal, state, and local entities lack comprehensive information on the vulnerabilities facing the industry." The chemical industry has undertaken a number of voluntary initiatives, particularly through its various trade organizations. Despite these efforts, the extent of the security preparedness remains unknown. The report recommends that "the Secretary of Homeland Security and the EPA Administrator jointly develop a comprehensive national chemical security strategy that is both practical and cost effective, which includes assessing the vulnerabilities and enhancing security preparedness." The full report can be found at www.gao.gov/newsitem/d03439.pdf.

In the Northeast several state and federal environmental agencies have begun to integrate P2 techniques into their homeland security activities so that they are simultaneously proactive in reducing security risks and implementing emergency preparedness and response programs. The following provides examples of what Massachusetts and EPA Region 1-New England have initiated.

NORTHEAST STATES

Pollution Prevention News

Northeast States Pollution Prevention News is published a few times per year by NEWMOA's P2 Program, called the Northeast States Pollution Prevention Roundtable (NE P2 Roundtable). The publication is provided free to the Northeast states, EPA, and other interested individuals and is supported by funds from EPA Region 1-New England and the Northeast States.

The NE P2 Roundtable would like to thank the following people for writing and producing this newsletter: Andy Bray, Diane Buxbaum, Peter Cooke, Joni Deane, Mike DiGiore, Tristan Gillespie, Rob Guillemin, Gary Gulka, Sara Johnson, Carole LeBlanc, Dennis Lucia, Jim McCaughey, Hannah Sarnow, Karen Thomas, Kim Trella, Paul Walsh, and Denise Zambrowski. Terri Goldberg managed production of the newsletter.

Please use the form at the back of this issue to request an address change, to add your name to the mailing list, or to request an electronic version of the newsletter. NEWMOA appreciates your cooperation in ensuring that the mailing list is correct.

MASSACHUSETTS

While chemical security has always been of prime importance to public health and welfare, it has become even more important now that emergency preparedness must also contemplate potential terrorist activities. Relying on existing and known methods for improving chemical efficiencies, managing chemicals safely, preventing chemical emergencies, and reducing the risk of accidental releases of chemicals is now central to the national effort to improve domestic safety. The EPA has developed outreach materials on chemical management. Through a grant from the EPA Region 1– New England, the Massachusetts Office of Technical Assistance (MA OTA) is incorporating these outreach materials into its workshops and routine technical assistance activities.

To strengthen industry’s ability to reduce the risks of storing dangerous chemicals at their facilities, OTA is soliciting and assessing feedback from workshop participants on the effectiveness of these outreach activities and materials. Further, at all upcoming events that OTA sponsors or in which it participates, several industry sectors will be provided with information that clearly links pollution prevention with site security, as well as the business advantages of reducing risks. It is anticipated that the results of this project will enable both Massachusetts and EPA Region 1-New England to refine programs in this critical area and deliver a model approach to reducing chemical risk associated with various industry sectors for the nation.

For more information contact: Denise Zambrowski, MA OTA, denise.zambrowski@state.ma.us.

EPA REGION I-NEW ENGLAND

EPA’s Chemical Emergency Preparedness and Prevention Office (CEPPO) helps prevent and prepare for chemical emergencies by informing the public about chemical hazards in their community and sharing lessons learned about chemical accidents. CEPPO offers a variety of

programs and resources that support source reduction approaches. Primary among these is Risk Management Planning (RMP), a program that requires certain facilities, which use extremely hazardous substances, to tell the public and CEPPO what they are doing to prevent accidents, and how they plan to operate safely and

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manage their chemicals in a responsible way. By increasing communication between industry and the public, Risk Management Plans help improve accident prevention and emergency response practices at the local level.

CEPPO’s Chemical Safety Audit (CSA) program consists of voluntary audits at selected facilities that review chemical process safety management practices. CEPPO publishes annual status reports that summarize the fiscal year’s CSA audit findings and identify successful and problematic trends.

CEPPO also provides Safety Alerts that explain the nature of hazards that have become evident through EPA’s accident investigation efforts. These Alerts focus on such issues as power outages, storage tank ruptures, chemical explosions, and toxic releases. For more information about CEPPO visit: <http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/index.html>.

For more information contact: Ray DiNardo, EPA Region 1-NE (617) 918-1804, dinardo.ray@epa.gov.

FEATURE ARTICLE

Dioxin Initiatives

Dioxin is a class of highly toxic and persistent chemicals that are frequently associated with various combustion sources of air pollution. Dioxin compounds have a variety of potential public health impacts that are the focus of a forthcoming EPA report, called the Dioxin Reassessment, including both cancer and non-cancer effects. Dioxin is considered to be potentially toxic at very low levels of exposure. Figure 1 illustrates the complex cycling of dioxin through the environment, which involves multiple sources, flows, reservoirs, and sinks.

Sources to air are dominated by the combustion of wastes and fuels. Sources to water include storm runoff, air deposition, and waste water discharges from certain industrial processes. Contributions to land include air deposition and the land spreading of waste water treatment sludge.

Flows include: air born transport of dioxin vapor and dioxin-contaminated particulates; water transport of dioxin contaminated suspended particulates; transport from land through wind and water erosion, transport by biota through trophic exchange, and the movement through commerce of contaminated materials.

Reservoirs include soil, sediment, and manufactured materials that contain dioxins that are temporarily stored but may later be released into the circulating environment.

Sinks represent the long term storage and isolation of dioxin in undisturbed soil and sediment. Although there is a general qualitative understanding of dioxin cycling in the environment, the quantitative understanding is limited.

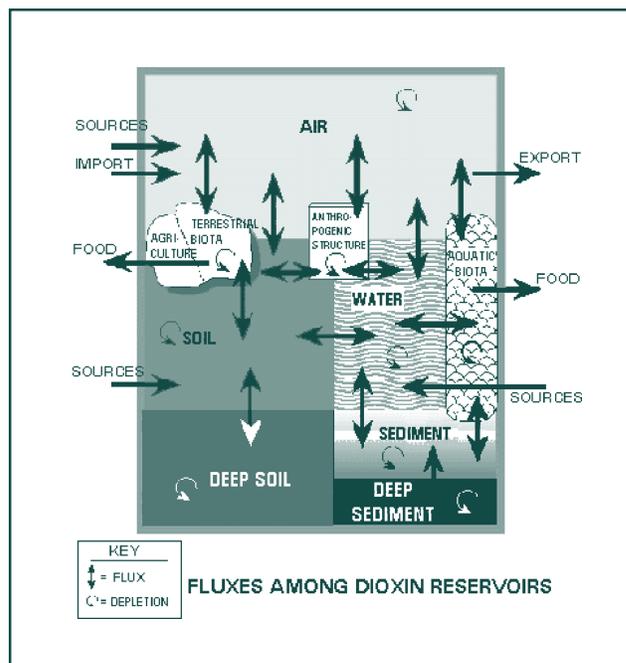


Figure 1: Dioxin Cycle in the Environment

Source: www.epa.gov

The EPA has been conducting its Dioxin Reassessment since 1991, when the Agency announced that it would conduct a scientific evaluation of the health risks resulting from exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and chemically similar compounds collectively known as dioxin. In September, 1994, EPA released the public review draft of the Dioxin Reassessment Documents that included three major reports: Estimating Exposure to Dioxin-Like Compounds, Health Assessment Document for 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and Related Compounds, and Risk Characterization of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and Related Compounds. This release was followed by a comment period and public meetings around the country to receive oral and written comments. In addition to this public review, each document was reviewed by EPA's Science Advisory Board (SAB). In response to the SAB, public comments, and newly available scientific informa-

tion, EPA has been working to revise and update the 1994 draft. Throughout 2000 and 2001 EPA's SAB reviewed and made recommendations for improving the draft report. In May 2001 the SAB forwarded its final review report to the Administrator. EPA has completed its revisions of the draft assessment in response to this SAB final report and public comments. Currently the report is under review by an Interagency Working Group on Dioxin (IWG). This group may recommend that the report be further reviewed by the National Academy of Science (NAS). A decision on whether to proceed with this NAS review should be concluded shortly. Information on the current status of development of the Dioxin Reassessment is available at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=55264>.

EPA is also developing a "Database of Sources of Environmental Releases of Dioxin-like Compounds in the United States." The purpose of this database is to document congener-specific emissions and environmental releases of polychlorinated dibenzo-para-dioxins (CDDs) and polychlorinated dibenzofurans (CDFs) from known source activities in the U.S. Included within the database are facility-specific emissions for a variety of CDD/CDF sources and congener-specific I-TEQ and WHODF-TEQ emission factors. The database contains information that can be used to track CDD/CDF emissions over time; to develop and compare congener-specific and homologue profiles for source categories; and to develop congener-specific emission factors that can then be used to undertake an emissions inventory of sources.

In anticipation of the release of the EPA Dioxin Reassessment, EPA Region 1-New England and several states in the Northeast have begun to examine their databases and information on sources of dioxin and to undertake activities to address this environmental challenge. The following provides a description of some of these activities.

MASSACHUSETTS

On October 29, 1999, the Environmental Protection Agency (EPA) added the category "dioxin and dioxin-like compounds" to the Emergency Planning and Community Right-to Know Act (EPCRA) Section 313 chemicals list and set a threshold for Toxics Release Inventory (TRI) reporting. The Massachusetts Toxics Use Reduction Act adopted these requirements beginning in reporting year 2000.

Dioxins are byproducts of chemical and combustion processes, often involving chlorine. Dioxins have poor solubility in water and thus accumulate in body fat and concentrate in the food chain. Because dioxin is considered extremely toxic, EPA established a very low reporting threshold of 0.1 gram.

For 2000, eight facilities in Massachusetts reported the use of dioxin and dioxin-like compounds, seven due to the coincidental manufacture of dioxin from combustion (97 percent of total use) and one due to the bleaching of paper.

For more information contact: Paul Walsh, MA DEP (617) 556-1011, <http://www.state.ma.us/dep/bwp/dhm/tura>.

VERMONT

According to the preliminary results of EPA's Dioxin Reassessment, backyard burning of residential waste is a potentially significant uncontrolled source of dioxin emissions. In an effort to curb backyard burning of trash in Vermont, the VT DEC has initiated a small grant program for the prevention of illegal burning of trash. This is the second year of grants that have been awarded to municipal solid waste districts, towns, and environmental groups that focus on citizen and youth education, and the development and enforcement of local ordinances that prohibit backyard burning. A total of \$38,000 has been awarded this year to fund the projects listed below. Through the grant program, several

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excellent educational materials have been developed for use by others, and there are success stories have been told, that can be applied elsewhere. Among the grant recipients are the following:

- Rutland Solid Waste District – funding to enact and enforce a district-wide ordinance for illegal burning and to conduct an educational program
- Vermont League of Cities and Towns – funding to survey all towns in Vermont, develop a pamphlet on implementing and enforcing a backyard burning ordinance, develop a model ordinance, and train local officials
- Association of Vermont Recyclers – provide student education programs, including theater shows and workshops in schools across the states
- Lamoille Solid Waste District – citizen education program through mailings and local newspapers.

For further information contact: Andrea Cohen, VT DEC (802) 241-2368, andrac@dec.anr.state.vt.us

EPA REGION I-NEW ENGLAND

As stated above, EPA has added dioxin to the list of chemicals subject to reporting for the Toxics Release Inventory (TRI). The 2002 TRI Report indicated that on- and off-site releases of dioxin and dioxin-like compounds for the country totaled 99,814 grams. Every New England state reported less than 24 grams of on- and off-site releases. The 2002 TRI Report, however, does not

include a number of important dioxin sources, including municipal waste incineration, backyard burn barrels, and medical waste incineration. To view the latest TRI data, visit www.epa.gov/tri.

For more information contact: Dwight Peavey, EPA Region 1-NE (617) 918-1829, peavey.dwight@epa.gov.

NEWMOA / NESCAUM

Reducing Dioxin Emissions from Uncontrolled Burning of Waste

Backyard burning of domestic waste is an important challenge in the overall efforts to control dioxin in the Northeast. The Northeast state environmental agencies are interested in working together to explore effective ways to reduce this source of dioxin emissions in the region. NEWMOA recently initiated a joint project with its sister organization, Northeast States for Coordinated Air Use Management (NESCAUM), to begin to address this problem in the region.

The goals of this project are to facilitate and coordinate the northeast states' activities to:

- Understand the scope and nature of barrel burning in the Northeast
- Assess solid waste capacity and costs associated with alternatives to waste burning
- Develop consistent assistance and enforcement actions in the region to promote compliance with regulations
- Develop and implement effective public outreach campaigns throughout the region
- Coordinate with other EPA regional offices (beyond EPA Regions 1 and 2) to develop education and outreach materials

For more information contact: Terri Goldberg, NEWMOA (617) 367-8558 x302, tgoldberg@newmoa.org.



NEW STATE P2 PUBLICATIONS

This section of NE States P2 News lists new P2 publications available from the Northeast states

Water Conservation Case Studies

MA OTA recently published two case studies focusing on industrial water conservation:

GKN Sinter Metals Corporation Water Conservation Case Study

The GKN Sinter Metals Corporation (formerly known as the PresMet Corporation), located in Worcester, Massachusetts, is the world's leading producer of structural powdered metal components for the automotive industry. The company implemented an on-site pretreatment and recycling operation, which reduced their total plant fresh water consumption by over 8 million gallons per year and soap consumption by more than 6,000 gallons per year. The installation of the pretreatment system also resulted in savings of over \$78,000 per year.

Cranston Print Works Company Water Conservation Case Study

The Webster, Massachusetts division of Cranston Print Works Co. (CPW) prepares, prints, and finishes cotton and blended fabrics for the craft, home sewing, and interior decorating markets. CPW achieved annual savings of over 110 million gallons of water and over \$350,000 from the implementation of 25 water conservation projects. These savings are attributed to the CPW's Water Conservation Team,

which was formed in response to the company's commitment to continuous quality improvement.

These and other case studies are available at www.mass.gov/ota/casestud.htm.

Environmental Best Management Practices for Artists & Art Studios

As part of a project to develop a series of Environmental Best Management Practices (EBMPs) for select industrial and commercial sectors, RI's Narragansett Bay Commission recently completed a final draft of an EBMP for Artists and Art Studios. In order to better address the environmental concerns of the local art community, NBC formed a stakeholder workgroup in June of 2002 consisting of representatives of the art community, RI DEM, the Rhode Island Counsel of the Arts, and the Rhode Island School of Design. Throughout the past year this group has met on numerous occasions on the development of this EBMP.

The largely voluntary practices that the EBMP recommends are offered as a way to protect health, save money, and reduce pollution in a sector that may not respond well to traditional command and control regulatory oversight. The EBMP touches on many topical issues, including fire safety and metals in paint, and is intended to serve as a prototype for other art sectors in the future.

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NEW STATE P2 PUBLICATIONS

Continued from page 7

The draft EBMP will be posted on the NBC's website at www.narrabay.com/publications.asp. A special survey on the Rhode Island State Council on the Art's website will link to this draft document. The purpose of the survey is to get feedback from the art community about the draft and offer them a chance to join a focus group to offer input that maximizes the EBMP's usefulness to its target audience.

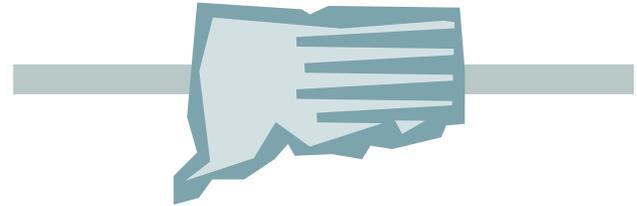
EMS Case Studies

In March 2003 MA DEP issued an EMS case-study booklet entitled "Sharing the Knowledge: Implementing Environmental Management Systems via Peer Assistance." The case studies are the result of a Peer Assistance project carried out by the Northeast Business Environmental Network (NBEN) to use industry peers to introduce EMS concepts to small and medium-sized companies in Massachusetts. The project was carried out under a Pollution Prevention Incentives for States (PPIS) grant awarded to DEP by EPA. The booklet is available at <http://www.state.ma.us/ota/support/NBEN.EMS.pdf>

Marinas

NYS DEC P2 Unit staff completed the "Environmental Compliance and Self Assessment for Marina Operators" manual. This manual is available on line at www.dec.state.ny.us/website/ppu.

PROGRAM UPDATES



CONNECTICUT

Connecticut Department of Environmental Protection (CT DEP)

Mercury Outreach

A mailing with information on the health effects of mercury will reach over 8,000 health care practitioners due to funds being made available through a Supplemental Environmental Project (SEP). The mailing includes a Spanish- and English-version brochure on mercury, a poster, booklets for women of childbearing age, and a joint letter from the CT Departments of Environmental Protection and Health.

For more information contact: Nan Peckham, CT DEP (860) 424-3297.

Green, High-Performance Schools

School board members, principals, school building committee members, and a variety of design professionals attended a CT Green Building Council event on Green, High-Performance Schools on June 12th. Presentations introduced the audience to the Leadership in Energy and Environmental Design (LEED) standards and provided examples of how LEED works. The first LEED Middle School construction project in Connecticut has been registered with the U.S. Green Building Council. Additional seminars on issues for schools are being planned in accordance with surveys completed by the audience.

For more information contact: Kim Trella, CT DEP (860) 424-3234.

Toxics in Packaging

The latest happenings with the states, including CT, who have passed the Toxics in Packaging model legislation include: for the second year in a row California has proposed legislation based on the model, and member states are coordinating with them on specifics of the model. Other work includes following up on complaints of non-compliance in the grocery industry supply chain, obtaining an EPA grant for compliance assessment work by member states, and working on the outline for a report (due this year to the Legislature) on the status of the current legislation and any recommendations for improvements.

For more information contact: David Westcott, CT DEP (860) 424-3297.



Maine Department of Environmental Protection (ME DEP)

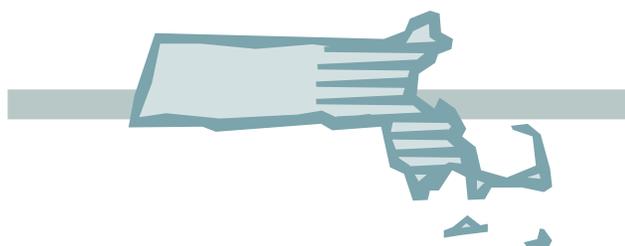
P2 Program Activities

Current activities of the Pollution Prevention Program in Maine DEP's Office of Innovation and Assistance (OIA) include:

- Providing on-site assistance with auto salvage and auto repair facilities.
- Providing outreach and assistance to small business development centers and small business counselors.
- Establishing further partnerships with business assistance providers.
- Establishing partnerships within the energy efficiency sector and promoting their services to Maine businesses.

- Assisting a Step-Up company with the implementation of an environmental management system.
- Targeting three more facilities for Environmental Management System implementation assistance.
- Conducting weekly P2 Plan inspections at facilities reporting under Maine Toxics Reduction Law.
- Conducting onsite compliance assistance utilizing Maine's Small Business Compliance Incentive Policy (SBCIP).
- Completing the legislatively-mandated P2 plan for dentists and working on a companion piece of legislation that will require amalgam separators.
- Continuing to provide assistance to the Green Campus Consortium in their efforts to move towards sustainability.
- Working in conjunction with the Climate Change Steering Committee on the New England Governor's and Eastern Canadian Premiers initiative to reduce green house gas levels 10 percent under 1990 levels by 2012.
- Attending three boat shows to encourage the use of low VOC gel coats and resins, acetone alternatives, and non-atomizing spray guns and equipment.
- Planning a demonstration/workshop for the boat building and repair sector in the summer of 2003.
- Reviewing the state procurement system to identify P2 opportunities as part of the Clean Government initiative and the law that established the Office of Pollution Prevention; emphasizing GS37 certification for cleaning products as proposed by Massachusetts.
- Completing a mercury manometer removal from 23 dairy farms; and coordinating the replacement of the manometers with an electronic manometer.
- Funding P2 assistance to the Maine Hospital Association.
- Continuing to provide assistance to a number of industry sectors.
- Revitalizing the Compliance Advisory Panel (CAP) as an effective tool to weigh in on OIA activities.

For more information contact: Peter Cooke, ME DEP (207) 287-7100.



MASSACHUSETTS

Massachusetts Office of Technical Assistance (MA OTA)

Industrial Water Conservation Seminars

On May 21, 2003, OTA co-sponsored a Technology in Process seminar at the Cranston Print Works (CPW) Webster, Massachusetts facility. The main focus of the seminar was on how a union/management team-oriented approach enabled CPW, a textile printing facility, to achieve water savings not believed possible in the textile industry. The highlight of the seminar was a guided tour of the facility, which helped participants gain a thorough understanding of more than 25 water conservation projects that have been implemented. The collective

result of these projects is an annual savings of 110 million gallons of water and close to \$350,000 in wastewater and energy costs. The seminar was well received by the 20 representatives from industry that attended; they indicated in their responses that CPW's approach to water conservation could apply to their companies.

On June 12, 2003, OTA co-sponsored a Technology in Process seminar at the Intel Massachusetts semiconductor manufacturing facility in Hudson, which is currently producing the Pentium® 4 microprocessors. The 30 participants, representing various industries, learned about how Intel implemented numerous water conservation projects through a team-oriented approach. These projects ranged from simple administrative modifications to Ultra Pure Water Recycle Systems and resulted in an annual savings of over 50 million gallons of water. The seminar demonstrated the importance of water conservation and reuse strategies for successful business growth and maintaining a competitive edge in the face of limited water and wastewater capacity. A tour of the facility for the participants enabled them to gain a thorough understanding of the Ultra Pure Water Recycle system. While the focus of the seminar was towards ultra pure water applications in semiconductor manufacturing, Intel's approach and concepts are transferable to other industries, such as printed circuit manufacturing.

Boston Scientific & Natick High School Partnership

On Friday, June 13, 2003, at Natick High School, MA Environmental Affairs Assistant Secretary Gina McCarthy, Director of the Massachusetts Office of Technical Assistance Paul Richard, and Natick School Superintendent Jim Connolly recognized The Boston Scientific Corporation for its participation in the Massachusetts Mentoring Program for School Environmental Safety and Health. The Massachusetts Mentoring Program for School Environmental Safety and Health brings industry expertise into local schools to create safer learning environments for students.

Boston Scientific has worked with members of Natick High School's Science Department to train teachers in the safe handling of chemicals in classrooms, preparation rooms, and chemicals storage areas. Boston Scientific and Natick High School continue to work together to develop further safety initiatives.



The Northeast P2 Roundtable is a member of the Pollution Prevention Resource Exchange, P2Rx, a national network of regional P2 information centers linked together to facilitate information retrieval from experts around the

country. Current P2Rx projects include online Topic Hubs and a National Assistance Programs Database. For information about these efforts, visit <http://www.newmoa.org/prevention>.

For more information contact: Andy Bray,
NEWMOA (617) 367-8558 x306, abray@newmoa.org

The Mentoring Program has received requests to participate in the program from the following 13 public high schools: Amherst-Pelham, Attleboro, Chicopee, Dedham, Haverill, Lee, Longmeadow, Natick, Narragansett Regional, Oakmont Regional, Quincy, Revere, Springfield, and Wayland. Nine of these communities have been matched with business mentors.

For more information contact: Denise Zambrowski, MA OTA, denise.zambrowski@state.ma.us.

Massachusetts Department of Environmental Protection (MA DEP)

Compliance & Enforcement Results in P2

A MA DEP core strategic objective is to eliminate or reduce the volume and toxicity of chemicals used and waste streams generated. Enforcement actions taken in response to non-compliance can provide a strong motivation for regulated entities to consider changes in operations to reduce or better manage toxics.

The MA DEP Bureau of Waste Prevention has developed a protocol to track P2 outcomes in enforcement actions. In some instances, it is possible to estimate the quantity of pollution prevented as a result of enforcement.

In response to DEP enforcement actions in fiscal year 2002, regulated facilities eliminated emissions of approximately 160 tons of ozone forming emissions and other hazardous air pollutants and conserved 5.4 million gallons of water. Those actions took a variety of forms, including changes in raw material, input substitutions, production design and operation modifications, on-site recycling, and implementation of environmental management systems with P2 measures. For example, enforcement for air quality violations at a manufacturing plant in Taunton led the company to replace a degreasing unit that emitted volatile organic compounds with a water-based unit, reducing the release of 3,300 pounds per year of trichloroethylene, a 99 percent decrease. Similar enforcement actions involving companies using paint spray booths, stripping furniture, and molding plastics often led them to solutions that eliminated or substantially reduced emissions below permitted levels.

Last year DEP continued its efforts to motivate the public and private sectors to institutionalize compliance reviews through the development of environmental management

systems or regular compliance auditing. Environmental Management Systems (EMS) encompasses a broad range of on-going management processes and procedures that allow an organization to systematically analyze, control, and reduce environmental impacts from its activities, products, or services. One venue to introduce these concepts is to give violators an opportunity to develop and implement an EMS as part of the resolution of an enforcement action. During fiscal year 2002, 17 administrative consent orders included the development of an EMS, bringing to nearly 50 the number of EMSs initiated through enforcement actions over the past 4 years.

DEP has also promoted EMS and compliance auditing

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outside the direct enforcement context. DEP and EPA Region 1-New England co-sponsored an initiative to motivate colleges and universities to audit their facilities for potential violations of state and federal environmental regulations in such areas as hazardous waste management, air emissions, and storm water management. As an incentive, institutions that participated were placed on a low priority inspection list and were ensured that no penalty would be assessed for violations that were reported in accordance with the agencies' self audit policies. Fifty-two private and public colleges in Massachusetts committed to participate in the initiative and are now submitting audits identifying and certifying correction of several hundred violations. In addition, DEP and EPA organized an EMS forum that brought together university representatives with experience developing environmental management systems with their peers from other schools who were interested in instituting an EMS at their campus.

DEP also developed a Municipal Stewardship program, funded by EPA, which offered small grants to about a dozen municipalities that expressed a commitment to develop an EMS to meet their community's specific compliance issues. The program includes mentoring and advanced EMS training, implementation of EMS activities, and measurement of environmental performance.

For more information contact: Paul Walsh, MA DEP (617) 556-1011.

Massachusetts Toxics Use Reduction Institute (MATURI)

Hands-On Technical Assistance

The Toxics Use Reduction Institute's Surface Solutions Laboratory (SSL) improves worker health and safety and reduces chemical risks by eliminating the use of organo/chlorinated solvents in degreasing operations. This important P2 work is accomplished by conducting application-specific performance tests of alternative cleaners that are usually water-based.

According to Tim Lindsey, Waste Management and Research Center in Illinois, industrial implementation of new technologies following laboratory testing is 30-60 percent, much higher than the national average of 10 percent for most other technical assistance programs without a laboratory/testing component. The following statistics were obtained from a scientific sampling of companies using SSL's services:

- 1/3 clients fully implement lab recommendations
- 1/3 clients partially implement lab recommendation
- 1/3 clients have not implement lab recommendations

These are encouraging findings that illustrate that successful technical diffusion can be enhanced by a hands-on approach.

For more information contact: Carole LeBlanc, TURI (978) 934-3249, carole_leblanc@uml.edu



NEW HAMPSHIRE

New Hampshire Department of Environmental Services (NH DES)

Hazardous Waste Coordinator Training & Certification

This first-in-the-nation certification program for Hazardous Waste Coordinators (HWC) has been implemented to provide a forum for educating generators in the complex regulatory area of hazardous waste management. Initial certification provides HWC with the regulatory nuts and bolts under the *Hazardous Waste Rules*, including a short introduction to P2 concepts. From May to December, 16 workshops have been scheduled to train full quantity generators (over 220 lbs/month). Future certification courses will be designed to encourage generators to move "beyond compliance," by developing resource conservation, waste minimization, and recycling programs at their facilities.

For more information contact: Susan Francesco, NH DES (603) 271-2967, sfrancesco@des.state.nh.us; visit <http://www.des.state.nh.us/hwcs/HWCCert/>.

2003 Governor's Award for P2

Three NH businesses won the 2003 Governors Award for Pollution Prevention. Portex, Inc in Keene, NH, who manufactures and distributes medical devices, eliminated the use and disposal of ethylene dichloride and initiated a water conservation project that decreased water consumption by 1.6 million gallons of water per year. Sullivan Tire Company in Bow, NH upgraded their truck re-treading facility and reduced energy (2 KW hours/tire) and raw materials (8,000 lbs of rubber). Wausau Papers of New Hampshire Inc. in Groveton, who manufactures fine printing and writing papers, installed a high efficiency steam/electric cogeneration facility. This reduced air emission by 85 percent; sulfur dioxide emissions were reduced so significantly by this project that EPA removed its on-site monitoring station.

In addition three NH businesses received Honorable Mentions: Cirtronics Corporation in Milford; City of Nashua Division of Public Works, Wastewater Treatment Facility; and Public Service of New Hampshire – Newington Station.

For more information contact: Colleen Schwalbe, NH DES (603) 271-0878, cschwalbe@des.state.nh.us, or visit <http://www.des.state.nh.us/nhppp/nh01003.htm>.

Mercury Reduction

Two mercury reduction bills were introduced in the 2003 legislative session: an auto switch bill and a bill to regulate mercury-added products. The auto switch legislation (SB 185) would ban the sales of vehicles with mercury switches and require auto manufacturers to develop and fund a collection program for switches. This bill was voted inexpedient to legislate. The mercury-added products bill (HB366) would require mercury-added product labeling, impose a disposal ban, and modify state procurement provisions. HB 366 was retained by the Science, Technology, and Energy Committee and will be worked on during the off-season and reintroduced next year.

Under a re-licensing agreement for the 15 Mile Falls Dam, located on the upper Connecticut River, the states of NH and VT will each receive \$150,000 for mercury reduction projects to be carried out in the watershed. NH will be focusing its efforts on school clean-outs, elemental mercury collections from dental offices, and a dairy manometer collection program. These projects will begin in spring of 2004, when DES receives the funds.

For more information contact: Stephanie D'Agostino, NH DES (603) 271-6398, sdagostino@des.state.nh.us.

Greening the Supply Chain

NH Ball Bearings (NHBB) in Peterborough, NH, has started a "Greening the Supply Chain" project in which it will help its suppliers develop formal environmental management systems (EMS). Like many manufacturers (e.g., Ford, GM, Nokia, Toyota, IBM, Motorola, and Pratt & Whitney), NHBB is going to use EMS as part of its decision on whether to continue its relationships with particular suppliers. However, NHBB is taking the next step by offering to help the suppliers build their EMSs by forming a partnership with EPA Region 1-New England and NH DES for a long-term training program regarding

EMS. This program is being offered to NHBB's suppliers and other interested parties. The program consists of monthly workshops and "homework" that will result in the participating facility successfully building an auditable environmental management system. The cost of the program is free. The program is being funded through EPA Region 1-New England. Capaccio Environmental Engineering, Inc. is conducting the training. NH DES supports this training in accordance with its EMS policy, which can be found at <http://www.des.state.nh.us/factsheets/co/co-11.htm>. For more information from NHBB contact Patti Carrier at (603) 924-3311.

For more information contact: Stephanie D'Agostino, NH DES (603) 271-6398, sdagostino@des.state.nh.us.



NEW JERSEY

New Jersey Department of Environmental Protection (NJ DEP)

Toxics Release Data Upgrades

New Jersey was one of the first states in the country to require public reporting of chemical inventory and environmental release data. In the past year, the NJ DEP's Office of Pollution Prevention and Release Prevention has updated all toxic substance release data for reporting years 1998 through 2001.

This June, the NJ DEP publicly released this data quantifying releases of toxic substances to New Jersey's air, land, and water by the state's largest industrial facilities.

The 2001 data includes 2,306 reports on substances covered by New Jersey's Right to Know law that were manufactured, brought into facilities, consumed in processes, shipped off site in products, released directly into

the environment, managed as waste on site, or shipped off site for further management (i.e., recycling, energy recovery, treatment, or disposal).

This data revealed that in 2001, total releases to the environment of hazardous substances were 18.1 million pounds. Of this total, approximately 78.1 percent were releases to air, 20.2 percent to water, and 1.7 percent to on-site land.

The total amount of materials used by industries reporting was 26.8 billion pounds in 2001. An important variable

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*An important variable that is reported
in New Jersey is the amount of
hazardous substances shipped in products.
For 2001, the amount shipped in products
is 87.8% of total usage.*

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that is reported in New Jersey, which differs from federal TRI reporting, is the amount of hazardous substances shipped in product. For reporting year 2001, the amount shipped in products is 87.8 percent of total usage, consumption is 11.2 percent, and non-product output is 1 percent. Non-product output is defined as all hazardous substances that are generated during processing, released to the environment prior to treatment, or shipped out in a waste.

Releases for industries that have been reporting since the Right to Know program began in 1987 decreased by 2.9 million pounds from 2000 to 2001, while hazardous substance use by these original industries decreased by 3.4 billion pounds. Releases for industries that began reporting for 1999 when additional companies were added to the Right to Know program decreased by 2.2 million pounds from 2000 to 2001, and during the same time hazardous substance use by these industries increased by 142 million pounds.

The Office of Pollution Prevention and Release Prevention is in the process of developing a report on trends of hazardous substance use and releases from 1994 to 2001.

For more information contact: Mike DiGiore, NJ DEP (609) 777-0518.

New Jersey Program for Manufacturing Excellence (NJME)

Camden Air Toxics Project

Located at Rutgers, The State University of New Jersey, the New Jersey Program for Manufacturing Excellence (NJME) provides no-cost P2 and energy efficiency assessments for New Jersey businesses, through a grant from the New Jersey Department of Environmental Protection (NJ DEP). Teams consisting of engineers, professors, and engineering students perform background research on a plant, and then spend one to two days on an in-plant audit. Within 60 days, a confidential report detailing the team's analysis and recommendations, along with estimates of related costs, performance, and payback period is sent to the plant manager. Six to nine months after this report has been submitted, NJME contacts the plant manager to see which, if any, recommendations have been implemented.

NJME has recently been invited to participate in the Camden Waterfront South Air Toxics Project, focused on identifying the sources predicted to pose the highest risk relative to other air toxics sources in the Camden, NJ area and finding ways to reduce the risk these sources pose. A workshop is planned in early July, with approximately 30 representatives from businesses in the Camden area invited to attend. As a result of this workshop, it is expected that many of the businesses will contact NJME for a P2/energy audit that will result in recommendations to improve efficiency in their use of hazardous substances.

The Camden Waterfront South Air Toxics Project is funded through a grant received by the Air Quality Evaluation Group at the NJ DEP from the EPA. The NJME program is one of three programs coordinated at the Rutgers Center for Advanced Energy Systems (CAES). CAES is a multidisciplinary Center dedicated to the creation, development, and promotion of new technologies and practices in the field of energy systems. The Center's mission includes the dissemination of knowledge through education and technology transfer, and taking a leadership role in shaping the present and future of energy policy in the state and nation. Activities include research; education and outreach, which seeks to increase visibility, awareness, and impact within the state of New Jersey; as well as addressing problems of significant national interest.

For more information contact: Bojan Mitrovic, NJME (832) 445-8289, mitrovic@camp.rutgers.edu.



NEW YORK

New York State Department of Environmental Conservation (NYS DEC)

Hospitals

EPA Region 2, NYS DEC, and the Hospital Association of New York State held an Environmental Compliance and Pollution Prevention Workshop for Hospitals in Albany in May. Staff from the Pollution Prevention Unit, the Division of Solid and Hazardous Materials, the Division of Water, the Division of Air Resources, and the Division of Environmental Remediation gave presentations on compliance assistance, medical waste, and P2 alternatives that hospitals can implement to reduce their environmental impact. There were approximately 40 healthcare professionals from facilities across the state in attendance at the workshop.

Mercury

NYS DEC staff met to review and update the latest draft of the Mercury Executive Order. The purposes of this Executive Order are to reduce or eliminate the use of mercury and mercury-containing products by State agencies, appropriately manage existing mercury or mercury-containing products presently owned by State agencies, and encourage others to do the same. The draft Executive Order was reviewed, updated, and resubmitted to the executive for consideration. Mercury elimination and the recognition of the need to reduce the impact of mercury on the environment continues to be major issue in New York. This draft Executive Order is an important step in the establishment of a comprehensive program to effectively manage mercury and mercury wastes from state agencies.

Program Move

As of April 15, 2003, the NYS DEC Pollution Prevention Unit operates under the Division of Environmental

Permits (DEP); Jeff Sama is the Director of DEP. Mary Werner, the former Director of the Pollution Prevention Unit, is enjoying retirement. Dennis Lucia, formerly the Chief of the Technical Assistance and Outreach Section of the Pollution Prevention Unit, is now Chief of the Unit. Unit staff continues to function as a distinct entity within the Division of Environmental Permits, retaining their program identity, phone numbers, and key functions.

For more information contact: Dennis Lucia, NYS DEC (518) 402-9484.



RHODE ISLAND

Narragansett Bay Commission (NBC)

Environmental Management Systems

On May 15, 2003, the NBC hosted a free, one-day workshop entitled "Introduction to Implementation of Environmental Management Systems." Metal finishers, hospitals, and others within the NBC district were invited. Publicly Owned Treatment Works from around Rhode Island were also invited. A total of 24 people attended the workshop.

The workshop was funded by the Global Environment & Technology Foundation through a cooperative agreement with the EPA. The trainers are well-know consultants from Tetra Tech EMI that is based in California. The basic information that they covered was practical and useful. Engaging exercises were used to help the audience identify their environmental aspects and impacts and prepare an environmental policy statement.

Some in the audience expressed an interest in learning more about how to fully implement an EMS. Tetra Tech

has promised to come back to Rhode Island again to give this type of in-depth training if enough people are willing to commit the time and money that would be required to hold such a workshop series.

For more information contact: Jim McCaughey, NBC (401) 222-6680 x352, PPR@Narrabay.com.

P2 for Junk Yards

The Narragansett Bay Commission (NBC) recently applied for an EPA Pollution Prevention grant to work with junkyards and scrap metal facilities within Rhode Island. This project will focus on identifying sources of pollutants from junkyard operations and utilizing P2 and

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NBC has more than 45 licensed auto salvage yards within its servicing district... NBC's P2 staff will conduct audits of these facilities to help identify P2 opportunities and educate facility operators on their regulatory obligations.

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sound environmental management practices to eliminate or at least reduce environmental impacts from these facilities.

The NBC has more than 45 licensed automotive salvage yards within its servicing district, most of which are located within urban/residential areas of Providence, North Providence, and Pawtucket. As part of this project NBC's Pollution Prevention staff will conduct audits of these facilities to help identify P2 opportunities and educate facility operators on their regulatory obligations and source reduction techniques. Specific areas to be covered include wastewater and storm water management, solid waste recycling, identifying and collecting mercury containing devices from junk cars, tire management and disposal, and worker health and safety concerns. Work on this project is scheduled to begin in September/October 2003.



VERMONT

Vermont Department of Environmental Conservation (VT DEC)

Amalgam Separator Pilot Project

Amalgam separators have been installed in over 20 dental offices as part of a DEC pilot project to evaluate operational performance of 6 different types of separators. The amalgam separators included in the pilot are: AB Dental Trends, Air Techniques, Bio-Sym Medical, Metasys, Rebec, and Solmetex. The pilot will run for six to eight months, and DEC expects to have a project report available next spring. Currently there is no requirement for separators in Vermont.

Governor's Awards

In May, the tenth annual Governor's Awards ceremony was held at the State House in Montpelier. Thirteen businesses, individuals, and other organizations were honored for efforts in P2, resource conservation, environmental stewardship, land use planning, and education and outreach. A description of award winners can be viewed at www.anr.state.vt.us/dec/ead/eadhome/default.htm.

Dental Voluntary Self-Certification Program

VT DEC is conducting a voluntary compliance self-certification program with over 350 dentists in the state. Dental practices that complete the self-certification form will be considered in compliance with wastewater and hazardous waste management requirements. The first self-certification is due July 1 and subsequent certifications will be every other year. Dentists were also mailed a listing of vendors of dental waste management services with detailed information on types of services and costs.

For further information contact: Gary Gulka, VT DEC (802) 241-3626, garyg@dec.anr.state.vt.us



WEB RESOURCES

This section of the NE States P2 News lists useful web resources that are focused on the topics of the Feature Articles.

P2 & ENVIRONMENTAL SECURITY

ChemAlliance

http://www.chemalliance.org/presentations/p2_and_plant_security/

Presentation by Scott Butner, ChemAlliance, at the National Pollution Prevention Roundtable's spring 2003 Conference.

Inherently Safer Processes & Plants

<http://home.att.net/~d.c.hendershot/papers.htm>

Links to articles and presentations by D.C. Hendershot of Rohm & Haas Company on inherently safer processes and plants.

PPRC Winter 2002 Newsletter

<http://www.pprc.org/pprc/pubs/newslets/winter02.pdf>

The Pollution Prevention Resource Center's winter 2002 "Pollution Prevention Northwest" newsletter was devoted solely to the topic of pollution prevention and environmental security. Topics addressed include energy, green buildings, smart growth, transportation, chemicals, insurance, federal agencies, state & local government, business & industry, and individual action.

Safer By Design

<http://www.chemsoc.org/chembytes/ezine/1999/kletz.htm>

An article from the Royal Society of Chemistry's web site by Trevor Kletz that focuses on the benefits of and barriers to "inherently safer technology."

A Checklist for Inherently Safer Chemical Reaction Process Design & Operation

<http://home.att.net/~d.c.hendershot/papers/ccps10-02.htm>

Protecting Communities from Chemical Hazards: Inherent Safety at Work

http://www.ems.org/chemical_plants/inherent_safety.html

List of examples of where P2 has been used to mitigate the risks of chemical releases.

Responsible Care Toolkit: Security Assessment

http://www.responsiblecaretoolkit.com/security_guidance_siteSec.asp

This material provides a number of tools for helping to assess the security of a site.

US EPA Strategic Plan for Homeland Security

http://www.epa.gov/epahome/downloads/epa_homeland_security_strategic_plan.pdf

This document represents the results of strategic planning for homeland security efforts. The goals of this strategic plan are organized into four mission-critical areas: Critical Infrastructure Protection; Preparedness, Response, and Recovery; Communication and Information; Protection of EPA Personnel and Infrastructure.

Continued on page 18

WEB RESOURCES

Continued from page 17

DIOXIN

Federal Dietary Guidelines

<http://www.health.gov/dietaryguidelines/>

Federal Dietary Guidelines for lowering the risk of dioxins while maintaining the benefits of a good diet is to choose fish, lean meat, poultry, and low or fat free (skim) dairy products and to increase consumption of fruits, vegetables, and grain products. Lean meats include those that are naturally lower in fat and meat where visible fat has been trimmed. For fish and poultry you can reduce fat by removing the skin. Reducing the amount of butter or lard used in preparation of foods and cooking methods that reduce fat (such as oven broiling) also lower the risk of exposure to dioxin.

Questions and Answers about Dioxins

<http://www.epa.gov/ncea/dioxinqa.htm>

Under the direction of the Interagency Working Group on Dioxin (IWG), the Food and Drug Administration (FDA) and the Food Safety Inspection Service (FSIS) have initiated a National Academy of Sciences' study to examine potential opportunities for reducing dioxin input into the food supply while maintaining the benefits of a balanced, healthy diet. The results of this study are expected in 2003.

Dioxin 2003: 23rd International Symposium on Halogenated Organic Pollutants and Persistent Organic Pollutants

<http://www.environmental-expert.com/events/dioxin2003/dioxin2003.htm>

Dioxin 2003 will be held in August at the Westin

Copley Place Hotel, Boston, MA. This is an annual meeting of worldwide experts concerned with the important and controversial topic of chlorinated dioxins, dibenzofurans, PCBs, and emerging organochlorines, such as the brominated flame retardants, perfluorinated compounds, chiral xenobiotics, and many others. Specialists from all areas of dioxin research, including analysis, sources, toxicology, abatement, risk assessment and regulatory activity, will meet to discuss the current state of the art.

Dioxins & Their Effects on Human Health

<http://www.who.int/inf-fs/en/fact225.html>

World Health Organization (WHO) with the Food and Agricultural Organization (FAO) through the joint FAO/WHO Codex Alimentarius Commission is considering the establishment of guideline levels for dioxins in foods. WHO is also working with the United Nations Environmental Programme (UNEP) by providing risk assessments of persistent organic pollutants (POPS), including dioxins. A number of actions are being considered internationally to reduce the production of dioxins during incineration and manufacturing processes.

Backyard Trash Burning: The Wrong Answer

http://www.dioxinfacts.org/sources_trends/trash_burning.html

Levels of many air pollutants are down across the United States thanks to successful government regulation and voluntary industry initiatives. This brochure focuses on an important uncontrolled source of air pollutants – backyard trash fires. This fact sheet is available from the Chlorine Chemistry Council.

For more information on P2 web resources contact: Andy Bray, NEWMOA (617)367-8558 x 306, abray@newmoa.org.



EPA REGION 1 - NEW ENGLAND

Colleges & Universities

EPA Region 1-New England's web site now features a Best Management Practices (BMP) Catalog for colleges and universities. The BMP Catalog includes 16 case studies that illustrate different approaches to promoting environmental projects at institutions of higher education. The Catalog answers such basic questions as "How do I get started?" and "What are the potential cost savings?" Visit the BMP Catalog at: <http://www.epa.gov/ne/assistance/univ/bmpcatalog.html>.

For more information contact: Peggy Bagnoli, EPA Region 1-NE (617) 918-1828, bagnoli.peggy@epa.gov.

Government Facilities

On June 4-6, Anne Fenn and Rob Guillemain worked with NEWMOA and EPA Regions II and III to host the "Greening the Government" conference in Philadelphia. The conference provided a forum for government facility managers and purchasing agents to learn about green programs, tools, and case studies. Conference sessions included topics on healthy indoor environments, energy efficiency, beneficial landscaping, green cleaning, green meetings, alternative fuel vehicles, green building, electronics procurement and recycling, environmentally preferable purchasing, and sustainable cafeteria operations. The conference culminated with an agreement to investigate the creation of a multi-agency network to promote sustainable activities at government facilities. To view PowerPoint presentations, visit www.newmoa.org and click on the P2 Section.

For more information contact: Robert Guillemain, EPA Region 1-NE (617) 918-1814, guillemain.robert@epa.gov.

Metal Finishing

On May 14, a workshop on EMS's for metal finishers and other small businesses was held at New Hampshire Ball Bearings in Peterborough, NH (see description in the NH Program Update above). As part of a "greening the supply chain" effort, the workshop kicked-off a 6-8 month long training series on EMS's for suppliers of New Hampshire Ball Bearings.

For more information contact: Linda Darveau, EPA Region 1-NE (617) 918-1718, darveau.linda@epa.gov.

K-12 Schools

Joan Jouzaitis delivered the introductory talk on chemical management and broad environmental issues to an audience of over 40 science teachers, administrators, and facilities management personnel at a ME DEP workshop held in Bangor, ME on May 20th. Joan also met with the Director of the vocational school hosting the event (The United Technologies Center of Bangor, ME) and learned about their systemic efforts to address environmental, health and safety issues. UTC maintains written procedures for addressing a wide range of EHS issues. The Director of the school indicated that a strong motivator to addressing issues thoroughly was the need to have a safer environment for the students.

For more information contact: Joan Jouzaitis, EPA Region 1-NE (617) 918-1846, jouzaitis.joan@epa.gov.

Colleges & Universities

On April 14, Gina Snyder, George Frantz, and representatives of Boston College and the University of Massachusetts visited the University of New Hampshire (UNH) to learn about their chemical management system. The comprehensive computer-based system includes barcode identification of all incoming chemicals, a complete chemical inventory, distribution information, and end-of-life data for chemicals that are used-up or removed for disposal. The system also includes information on training, MSDSs, hazards, and extremely hazardous chemicals that receive priority attention by college officials. The system allows "surplus chemicals" to be placed for "adoption" rather than disposal. Preliminary findings indicate that the new system has resulted in a 14 percent reduction in hazardous waste,

but it is too soon to attribute this result to a specific cause. UNH designed the system and is making it available.

For more information contact: George Frantz, EPA Region 1-NE (617) 918-1883, frantz.george@epa.gov.

P2 Grants

Eight pre-proposals for the P2 Grant Program (formerly know as PPIS) were recommended for funding. At least one pre-proposal was selected from each of New England's six states. Final grant awards will be made after complete application packages have been received and processed later this summer.

For more information contact: Robert Guillemain, EPA Region 1-NE (617) 918-1814, guillemain.robert@epa.gov.



EPA REGION 2

Hospital Outreach

EPA Region 2 has sponsored a series of one to two day Hospital Pollution Prevention/Environmental Compliance Conferences starting in 2000. During this fiscal year there have been five sessions, including two in May (New York City and Albany), and one in June (Rochester). The goal of these recent conferences is to offer training to hospitals as a part of the Region 2 Hospital Compliance Initiative.

These conferences have involved about 40 to 115 attendees and covered a variety of environmental regulations, including RCRA, air, water, underground storage tanks, and a variety of EPA P2 programs, such as WasteWise, EnergyStar, National Performance Track, H2E, and others. EMSs were covered as well as the Voluntary Audit Policy/Corporate Audit Agreements. A

final conference remains for this fiscal year: July in Princeton. These conferences have been cosponsored with trade organizations, hospitals, academics, and government agencies.

Region 2 patterned its Hospital Initiative after the successful College and University Compliance Initiative. To date a number of hospitals have commenced corporate audit agreements, and one has been finalized. These agreements enable hospitals to self-audit, report, and correct violations found with extensive and possibly full penalty mitigation.

For more information contact: Diane D. Buxbaum, EPA Region 2 (212) 637-3919, buxbaum.diane@epa.gov.

Clean Marine Engines

In conventional two-stroke marine engines, which for many years have powered most outboard engines and personal water craft, as much as 30 percent of the gasoline passing through the combustion chambers is not burned or only partially burned. The result is emissions of dark smoke containing hydrocarbons and nitrogen oxides, which contribute to the formation of ground-level ozone or smog. Unburned gasoline is also released directly into the water from such engines, contaminating water bodies with such toxic chemicals as benzene, toluene, xylene, and ethylene.

Marine engine manufacturers now make engines that emit 75 percent less air pollution, burn 35 to 50 percent less fuel, use up to 50 percent less oil, and discharge significantly less gasoline directly into the water than conventional engines. Seven years ago, in cooperation with marine engine manufacturers, EPA established emissions standards for new gasoline outboard engines and personal water-craft engines with a goal of reducing hydrocarbon emissions from such engines 75 percent by 2025. EPA has been phasing in increasingly more stringent air emissions requirements for the engines since 1998 and will reach full implementation in 2006.

EPA Region 2 recently initiated a formal agreement with the Marine Trades Association of New Jersey (MTA/NJ), the National Marine Manufacturers Association (NMMA), the Marine Retailers Association of America (MRAA), and the New Jersey Department of Environmental Protection

Continued on page 22

NORTHEAST STATES P2 CALENDAR

TITLE	SPONSOR	DATE / LOCATION	CONTACT
The Groundwater Pollution & Hydrology Course	Princeton Groundwater, Inc.	July 14-18, Orlando, FL; August 4-8, San Francisco, CA	813-964-0900
4 th Environmental Innovations Summit	The Performance Institute	July 14-16, Arlington, VA	703-894-0481
EMS for Federal Facilities	ABS Consulting	July 14-16, Las Vegas, NV	301-921-2345
New Source Review Rules	ABS Consulting	July 16-17, Atlanta, GA; October 21-22, Las Vegas, NV	301-921-2345
How to Audit Your EMS	ABS Consulting	July 17-18, Las Vegas, NV	301-921-2345
Indoor Air Quality Problems & Engineering Solutions	A&WMA, EPA	July 21-23, Research Triangle Park, NC	412-232-3444
Clean Air Compliance Institute	ABS Consulting	July 28-31, Hilton Head, SC	301-921-2345
Sustainability & Industry-Increasing Energy Efficiency & Reducing Emissions	ACEEE	July 29- August 1, Rye Brook, NY	302-292-3966
Clean Water Compliance Institute	ABS Consulting	August 4-7, Hilton Head, SC	301-921-2345
Federal Facility Environmental Compliance Bootcamp	ABS Consulting	August 4-8, Houston, TX	301-921-2345
Designing Your EMS: A Federal Facilities Workshop	EPA Regions 5 & 7	August 5-7, Kansas City, KS	913-551-7618
Summer GLRPPR Conference	GLRPPR	August 6-8, Erie, PA	630-472-5019
2003 ECOS Annual Meeting	ECOS	August 10-12, Salt Lake City, UT	202-624-3660
Environmental MBA School	ABS Consulting	August 11-13, Hilton Head, SC	301-921-2345
Chemistry Bootcamp	ABS Consulting	August 11-15, Hilton Head, SC	301-921-2345
23 rd International Symposium on Halogenated Organic & Persistent Organic Pollutants	Battelle, CIL, JEOL USA, Thermo Finnigan	August 24-29, Boston, MA	617-262-3424
In Search of Zero Waste	ABS Consulting	September 11-12, Chicago, IL	301-921-2345
Evaluating Methods & Environmental Outcomes	CBCRC	September 14-16, Salt Lake City, UT	434-924-1970
18 th Annual Hazardous Materials Management Conference on Household & Small Business Waste	NAHMMA	October 6-10, Kansas City, MO	816-784-2083
Environmental Monitoring, Evaluation & Protection in NY	NYSERDA	October 7-8, Albany, NY	866-NYSERDA
11 th International Conference of the Greening of Industry Network	GIN	October 12-15, San Francisco, CA	781-646-4596
Green Power Options Seminar	WebCom Communications	October 21, Waltham, MA	800-803-9488
Sustainable Innovation 03	CfSD	October 27-28, Sweden	+44 0 1252-8927 72
GLOBE 2004	GLOBE	March 31- April 2, 2004, Vancouver, BC	604-775-7300
7 th International Conference on Mercury as a Global Pollutant	Jozef Stefan Institute	June 27-July 2, 2004, Ljubljana, Slovenia	+386 0 1 241-7134

For a more complete listing of upcoming events, visit www.newmoa.org

through which the parties will work to ensure that by 2005 95 percent of the two and four-stroke marine engines sold in the state are low-polluting. On the day the agreement was signed, EPA Region 2 presented certificates of recognition to several New Jersey retailers that have committed to sell the cleaner engines. The Agency expects to sign a similar agreement on Long Island that will include the two national associations, the Empire State Marine Trades Association (ESMTA), the Association of Marine Industries, the New York State Marine Trades Association, and the NYS DEC.

Under these agreements, participating retailers encourage customers to buy low-polluting engines. By 2003, 80 percent or more of the new engines sold will use cleaner

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Seven years ago, in cooperation with marine engine manufacturers, EPA established emissions standards for new gasoline outboard engines and personal water-craft engines with a goal of reducing hydrocarbon emissions from such engines 75 percent by 2025.

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technologies; by 2005, that number will rise to 95 percent. Participating retailers will provide ESMTA or MTA/NJ with low-polluting engine sales information, which will then be provided to EPA in aggregate form. NMMA, MRAA, and the two state associations will help their members achieve these goals by providing them with marketing and communications assistance, training, and research. In turn, EPA will develop public education materials to spread the word about cleaner marine engines and will work with state agencies and municipalities to support the use of these engines.

For more information contact: Tristan Gillespie, EPA Region 2 (212) 637-3753.



NORTHEAST P2 ROUNDTABLE

EMS Case Study

NEWMOA has recently published a case study titled “The Roles of Materials and Cost Accounting in an Environmental Management System: A Case Study of Precix, Inc. (formerly Acushnet Rubber Company).” This case study is an example of how one company effectively used materials and cost accounting in an environmental management system framework to achieve its goal of reducing the use and release of toxic chemicals, and reducing exposure to employees, the public, and the environment. The case study can be found at www.newmoa.org/prevention.

For more information contact: Terri Goldberg, NEWMOA (617) 367-8558 x302, tgoldberg@newmoa.org

P2 Rapid Response Service

A P2 information “Rapid Response” service is available to aid environmental assistance programs throughout the Northeast in locating information quickly. Information requests can be submitted through an online form on the NEWMOA website, email, or phone calls. NEWMOA’s engineering staff discusses the request and conducts research using online resources, the NEWMOA clearinghouse, and outside lending institutions, if necessary. When the staff has collected the available information, they cull through it to verify its relevance before forwarding it on to the person making the request.

To utilize this service contact: Andy Bray, NEWMOA (617) 367-8558 x306, abrav@newmoa.org; or visit: www.newmoa.org/about/library.cfm.

P2 Topic Hubs

Topic Hubs are web-based guides to peer-reviewed P2 information and expertise on a particular subject. The Topic Hubs are a project of the Pollution Prevention Resource Exchange (P2Rx). Under this initiative, the Regional P2 Information Centers that make up P2Rx have published 45 Topic Hubs to-date (see the list of Topic Hubs below).

NEWMOA has recently launched a new Topic Hub on Mercury in Automobiles. This Topic Hub provides a

quick guide to the essential P2 information on Mercury in Automobiles, as well as a compilation of pertinent on-line resources. The quick guide includes information on the sources of mercury in automobiles; state and local programs designed to “switch the switch” on automobiles; non-mercury alternatives to mercury components in automobiles; requirements and lists of recyclers; and how to clean up spills when they occur. Visit the Mercury – Automotive Topic Hub at: <http://www.newmoa.org/prevention/topichub/toc.cfm?hub=104&subsec=7>

CURRENT P2 TOPIC HUBS:

- Aerospace
- Ag Teaching Labs
- Auto Body
- Auto Repair
- Clean Snowmobiles
- Community Growth
- DoD - Construction and Demolition
- DoD - HAZMAT Control Pharmacies
- DoD - Household Hazardous Waste
- DoD - Painting and Coating Operations
- Electric Utilities
- Electronic Waste
- EMS
- Environmental Management Accounting
- Environmental Measurement
- Environmental Mentoring
- Fiberglass Fabrication
- Food Service
- Gas and Oil
- Green Procurement
- Hospitality
- Household Hazardous Materials
- Landscaping
- Lean Manufacturing
- Marinas & Small Boat Harbors
- Meat Processing
- Mercury
- Mercury - Health Care
- Mercury - Schools
- Mercury-Automotive
- Mercury-Dental
- Mercury-Thermometers
- Mercury-Thermostats
- Metal Fabrication & Machining
- Metal Finishing
- Paint & Coating Manufacturing
- Pollution Prevention (P2)
- Printing - Flexography
- Printing - Lithography
- Regulatory Integration
- Residential Construction
- Ship Building & Repair
- Ski Areas
- Textiles
- Youth Education

To access any of the Topic Hubs listed above visit: <http://www.newmoa.org/prevention/topichub/>.

For a list of future Topic Hubs visit: http://www.p2rx.org/P2InfoNexpert/TopicHubs_2.cfm



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