FEATURE ARTICLE

Environmental Management Systems (EMS) Projects

All of the states in the Northeast and EPA Region I have at least one project underway to promote the use of environmental management systems (EMS) by small to medium-sized businesses. These efforts are designed to help improve compliance and to encourage pollution prevention at companies, institutions and local government. The projects underway in Connecticut, Massachusetts, New Hampshire, New York, Vermont and EPA Region I are described in detail below.

Connecticut

Training for Institutions

As part of the Hartford Neighborhood Environmental Project, the CT DEP and the CT Hospital Association are co-sponsoring training for hospitals and colleges on Environmental Management Systems in February and April. This training is being presented by consultants to the Northeast Business Environmental Network and includes special attention to the needs of an institution. The two-part training includes an assignment at the end of the first session to try to apply some EMS techniques at each institution. The second session will include discussion by attendees of the EMS techniques that do and do not work in their institutional settings. Information will also be presented on mercury reduction. For more information, contact Kim Trella (860) 424-3297.

Massachusetts

MA DEP is engaged in the implementation of a Pollution Prevention Incentives for States (PPIS) grant whose purpose is to promote environmental management systems (EMS) in small to medium-sized businesses. Using a successful model provided by the Northeast Business Environmental Network (NBEN), twelve “pilot firms” will participate in a mentoring program in which peers in their respective industries will assist them in adopting and implementing environmental management systems. As a part of the grant, a workshop was presented concerning performance measures to representatives of 30 interested firms. NBEN, the Office of Technical Assistance (OTA) and the Toxic Use Reduction Institute (TURI) are presently engaged in outreach efforts to recruit small to mid-sized facilities for the pilot project.

The project consists of three elements: improving performance of participating facilities, expanding access to Best Management Practices (BMPs) proscribed by environmental management systems, and reporting the positive results of the process to as many small to medium-sized firms as possible. Participating facilities will be surveyed to determine gaps in their environmental performance. Based on this information, the appropriate industry peer will meet with facility managers and determine an implementation strategy. Metrics will be established to measure performance and to justify

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Winter 1999
operational changes at a facility.

Access to EMS training will be facilitated by a series of workshops instructing facilities on various elements of EMS. The Northeast Business Environmental Network Web page will include a new area detailing the status of the project and documenting case studies of the participating facilities. DEP shall promote the goals and results of the project internally and externally to stakeholder groups through workshops, existing meetings, and newsletters. Finally, the project will work with EPA’s StarTrack program to develop standards for 3rd party audits. For more information contact Paul Walsh (617) 556-1011.

The Toxics Use Reduction Institute at the University of Massachusetts Lowell has been offering workshops on EMS for a number of years as part of both its ongoing continuing education program for TUR planners, facility managers, consultants, state agency personnel, and others. During the past year, as part of its 1998 Cleaner Technology Demonstration Site Program, TURI, in partnership with Acushnet Rubber Co. (the first company in the state to receive ISO 14000 certification), invited Massachusetts manufacturers to the firm's New Bedford facility for on site ISO training.

EMS systems are also covered in Univ. of MA Lowell's Cleaner Production graduate program taught by TURI staff. Vesla Veleva, a doctoral candidate in the program, has been working at TURI to develop indicators of sustainable production as part of her dissertation. The indicators will provide companies with an internal management tool and benchmark for determining whether the EMS is actually working. She is also doing a work study project for the Northeast Business Environment Network on Environmental Health and Safety (EHS) performance evaluation guidance for use under the Forum for Best Management Practices Peer Assistance Program, where participating companies share EMS practices and procedures with each other.

TURI's Technology Transfer Center will be publishing a selected and annotated bibliography on EMS, ISO 14000, Environmental Performance Evaluation, and Total Quality Environmental Management. Two doctoral candidates in the Cleaner Production Program have been screening and abstracting these articles and books for researchers and practitioners in this field.

New Hampshire
The prospect of companies managing their environmental affairs in an organized and proactive manner has the New Hampshire Department of Environmental Services (DES) very interested in the ISO 14001 Environmental Management System. The use of this system represents a paradigm shift for the private sector and may show a way to more effective environmental protection in the future.

DES is working to see if this optimistic vision has hopes of coming true. Using EPA grant funds, DES is assisting a group of firms in the NH seacoast area to put ISO 14000 EMS into place, while watching for differences in rates of compliance, P2 and other categories. At least ten states are doing similar projects, and plan to feed data to a database being managed by the Univ. of N. Carolina at Chapel Hill.

This project also helps DES fulfill the requirements of Chapter 295 of the NH Laws of 1997, which tasked DES to disseminate information on the benefits of EMS use, and to determine what assurance of compliance
registration to the ISO 14001 standard brings.

**New York**

The EPA awarded a grant to the New York State DEC Pollution Prevention Unit for an environmental audit/pollution prevention assessment project. The objective of this project is to develop a comprehensive and standardized environmental audit/pollution prevention assessment protocol to be used voluntarily by small to medium-sized industries and facilities. The audit/assessment protocol will be designed to assist facilities in assessing their environmental standing and to offer pollution prevention measures and technical assistance to achieve their environmental goals, while meeting regulatory requirements. The audit/assessment protocol will be based upon the guidelines set forth by ISO 14000, voluntary environmental management system standards that have been developed for incorporating environmental aspects into operations and product standards. This protocol will provide a standardized approach for determining multi-media compliance, identifying non-compliance and ways to correct non-compliance, and identifying P2 opportunities.

The project will focus on six specific industrial sectors: metal finishers, printers, paper and pulp industries, electronics, food, and wood finishing industries. These industry types were primarily selected based on the results of a survey of stakeholders (including regulators) and the business community, who identified these as especially suitable for this type of assessment and auditing.

The project has just completed year one of a projected four year time frame. During this year, the Pollution Prevention Unit has been networking with the EPA, state and local governments, industry representatives, the public, the New York Manufacturing Extension Partnership, and the banking and insurance agencies and has developed a list of stakeholders for the project. The Pollution Prevention Unit has been gathering information from the stakeholders regarding specific industries, ISO 14000, environmental management systems and incentives for environmental audits. On January 12, 1999, the Pollution Prevention Unit conducted a stakeholder meeting to publicize the project and to solicit input from the stakeholders. The Pollution Prevention Unit is in the process of analyzing the stakeholder comments and incorporating them into the protocol.

NYSDEC plans on assisting firms with EMS design, EMS implementation, and public stakeholder involvement through the Environmental Audit/Pollution Prevention Assessment Project. The NYSDEC is exploring the use of a forum in which a facility with an ISO 14001 EMS can share their experiences and approaches with a facility seeking to develop an EMS of their own. NYSDEC has an ongoing pilot project with a NYS utility to evaluate the effectiveness of an ISO 14001 EMS. Several facilities have notified the NYSDEC that they are in the process of being ISO 14001 certified or are developing an equivalent EMS. NYSDEC intends to monitor the progress of some of these facilities.

In addition, the Pollution Prevention Unit is involved in the Multi-State Working Group (MSWG) on Environmental Management Systems. The MSWG is a voluntary group of participants from state, federal, non-governmental, business and higher education organizations that are interested in the effectiveness of Environmental Management Systems, particularly those based on ISO 14001.

**Vermont**

Vermont DEC has been involved with environmental management systems and technical assistance since the spring of 1998, after being one of several states, including both Vermont and New Hampshire, to receive funding as part of an EPA Headquarters pilot to evaluate the environmental benefits of ISO 14000-equivalent environmental management systems.

VT DEC used some of the grant funds to hire a consultant to develop an EMS design and implementation workshop series. DEC announced the availability of the program to Vermont service sector businesses and manufacturers, with the hope of involving small to mid-sized businesses. Participating businesses receive no-cost training and on-site assistance in developing an EMS that addresses all of the ISO 14001 elements and standards. But certification to the standards is not the intent of the program. Those participants wishing to seek certification could do so on their own. In exchange for the training and assistance, participants agree to complete surveys on environmental performance before, during, and after EMS design and implementation.

About 15 facilities initially responded to the advertisement of the program, with 12 facilities eventually agreeing to participate. Participants included both service-sector businesses and manufacturers, ranging in size from a small electrical utility with 42 employees and a manufacturer of reamers, employing 65 people, to manufacturers with 100-400 employees. In
addition, a large health care facility (with over 3000 employees) signed up.

The workshop and program format consists of a series of seven EMS design and implementation workshops over a period of a year, beginning in May 1998 and ending in late April 1999. Each training session addresses several of the 17 elements of an ISO 14001 EMS. Worksheets were developed for many of the elements (such as ranking of significant environmental aspects; and objective and targets development) to assist facilities in completing these elements. Workshops have been spaced two or more months apart to allow facilities to work on completing the assigned EMS elements. The workshops allow for participants to share information, successes, and problems encountered. Staff from the Environmental Assistance Division and Vermont Small Business Development Center provide on-site assistance and review upon request.

Lessons Learned

Several facilities participating in the project have experienced difficulties in securing management commitment for development of an EMS. Many of the participating facilities are not under pressure to obtain ISO certification and therefore see EMS as a lower priority when other pressing issues come about. Many facilities have general difficulty in allocating time and making the necessary commitment to work on their EMS. It was initially envisioned that facilities in the pilot would complete their EMS in a 6-7 month period. A more realistic time line is now more than one year. Some have had difficulty in forming teams of key players to assist and participate in EMS development. On the other hand, a few participating facilities have since learned or decided at the corporate level to pursue ISO 14001 certification since the pilot began and are now more committed.

Small and mid-sized manufacturers must understand the benefits to their facilities of developing an EMS. This is often not readily apparent, however it is key to management commitment. State programs can help facilitate this process by providing case studies and contacts in other similar facilities that have successfully pursued EMS development. One of the most valuable parts of the EMS training was hearing from a smaller manufacturer (165 employees) that obtained ISO 14000 certification and explained the process and the benefits they have experienced.

The jury is still out on just how valuable an EMS proves to be for smaller businesses participating in the pilot. Many participants sense the value of a more systematic, well documented approach to pollution prevention and compliance that comes about as a result of an EMS. It is readily apparent that pilot facilities with ISO 9000 certification find it easier in many respects to develop an EMS.

Regulatory Flexibility Considered

Vermont DEC is providing some regulatory flexibility for facilities that have developed an EMS in the area of pollution prevention planning requirements. For this round of Pollution Prevention Plans due July 1, 1999, an EMS Alternative to planning is being offered. (A similar EMS alternative is provided by Washington State.) Facilities that are already ISO 14000 certified and those participating in the pilot are eligible for substituting their EMS for the required plan, provided that the EMS adequately addresses pollution prevention in its objectives and targets and the EMS stands up to established review criteria.

EPA Region I-New England

As the New England Office of EPA increasingly recognizes the potential for EMS to help organizations maintain compliance and achieve better overall environmental performance, the Agency is currently sponsoring several projects:

- **The StarTrack Program** The StarTrack Program uses private, third-party certification of compliance auditing and environmental management systems as an alternative compliance oversight mechanism. StarTrack emphasizes compliance assurance, public reporting of performance, and verification by private third parties with both compliance and EMS auditing expertise. Currently, 14 corporate facilities and one federal facility are participating in the StarTrack pilot.

- **State EMS Pilots** New Hampshire, Vermont, Massachusetts, and Rhode Island are conducting pilot projects supported by EPA grants to provide training and assistance to regulated entities in implementing EMS (see descriptions above). The majority of participants in these state-sponsored programs are small to medium-sized facilities, reflecting the importance of small business to the New England economy.

- **Municipality EMS Pilot** This novel pilot is aimed at assisting government agencies - primarily municipalities - in implementing effective EMS. New England participants include the City of Lowell, MA, the Town of Londonderry, NH, and a
Massachusetts Department of Corrections facility.

- **Londonderry Eco-Park** The Londonderry Eco-Park (LEP) is an innovative project combining industrial ecology theory (e.g., byproduct exchange) and EMS in a proposed industrial park in New Hampshire. The LEP will comprise both individual company EMS and centralized, park-wide EMS functions, including collective planning, performance verification, and reporting.

  For further information, contact Marge Miranda, EPA Region I (617) 918-1825.

**PROGRAM UPDATES**

**CONNECTICUT**

**CONNECTICUT DEP**

**Chemical Waste Management Training for Schools**

A Supplemental Environmental Project (SEP) is currently being negotiated that will provide training to secondary schools in proper waste management techniques. The goal is to minimize the amount of chemical waste generated at secondary schools in Connecticut. Topics covered will include: substitution with less toxic or non-toxic materials; MSDS; lab safety; protective equipment; storage compatibility; refrigeration; and spill response issues. In addition, purchasing strategies and micro-scale chemistry will be topics as well as waste disposal practices. The audience for the training will include traditional, vocational, and technical high schools along with junior colleges. Dates have not yet been set. For more information, contact Elise Bennett (860) 424-3297.

**Public Awareness Campaign on Mercury-Containing Products**

A two-year campaign designed to raise public awareness of the risks of mercury-containing products and suggest possible product alternatives is in the planning stages in Connecticut. This campaign will be funded by an SEP and have as its goal, over time, a reduction in the amount of mercury-containing products being disposed of in the municipal solid waste stream. Information will be made available on recycling opportunities for such items as mercury batteries, fluorescent bulbs, and other mercury-containing products.

  **Case Study Highlights P2 Success**

A spring manufacturer has been highlighted in the latest pollution prevention case study produced by CT DEP. The business was able to change its hazardous waste status from a Large Quantity Generator (LQG) to a Small Quantity Generator (SQG) by dramatically reducing its use of tetrachloroethylene. The success was due in part to an SEP that the company was able to negotiate to purchase a more sophisticated parts degreasing system. Copies of the case study are available from David Westcott (860) 424-3297.

  **For more information contact:** Kim Trella (860) 424-3297.

**MASSACHUSETTS**

**MASSACHUSETTS DEP**

**Massachusetts Mercury Action Plan**

In June 1998, all the New England Governors and the Eastern Canadian Premiers endorsed the Regional Mercury Action Plan. The plan’s ultimate goal is to virtually eliminate mercury deposition from human sources; its near-term goal is to cut mercury emissions in half by 2003 through implementing a combination of source reduction, recycling, and strict emission control measures.

The Massachusetts Mercury Action Plan includes the following:

- C Develop source separation/reduction requirements for mercury and other toxic substances and precursors in the new Municipal Waste Combustor Regulations.
- C Develop medical waste incinerator regulations that will also have requirements to reduce and or separate mercury before incineration.
- C Organize a P2 Conference for healthcare providers. (Over 180 persons attended.)
- C Fund the University of MA Lowell to investigate alternatives to products containing polyvinyl chloride or mercury.
- C Work with healthcare organizations, EPA, and Beth Israel Hospital to implement a mercury thermometer exchange.
- C Participate in the American Hospital Association/EPA workgroup to reduce mercury waste by 50 percent by the year 2003.

**Environmental Results Program Approved by EPA**

The EPA has designated MA DEP’s Environmental...
Results Program (ERP) as a national XL Project, making Massachusetts the first state in the country to receive that status. “Today, we are giving this project EPA’s seal of approval in the hopes that we can some day apply similar self-certification programs in other states,” said EPA Region I-New England Regional Administrator John DeVillars. “By improving accountability and increasing flexibility for companies— as well as providing an extensive amount of technical and pollution prevention assistance—ERP will achieve environmental results at less cost.” ERP replaces conventional permits with stringent industry-wide environmental performance standards, requiring companies to submit annual certifications signed by a corporate official who assures that the standards are being met.

**MA DEP to Implement New Emissions Check-Up**

In the fall of 1999, Massachusetts will implement an enhanced inspection and maintenance (I&M) program for cars, buses, and trucks to identify vehicles with excess emissions and ensure that they are repaired. This new program is expected to reduce smog-causing vehicle emissions by 25 percent. Cars will be tested on a dynamometer, a treadmill-like machine that simulates actual driving conditions. In addition to analyzing exhaust emissions, such as carbon monoxide and volatile organic compounds, more accurately than the current idle test, the new test procedure will also, for the first time, measure emissions of nitrogen oxides, one of the main ingredients in the formation of ground-level ozone.

**For more information contact:** Paul Walsh (617) 556-1011.

**MASSACHUSETTS TURI**

**1999 Demonstration Sites**

Four Massachusetts manufacturers have been designated 1999 Cleaner Technology Demonstration Sites by the Toxics Use Reduction Institute (TURI). The companies received a total of $60,000 in matching grants from TURI for their projects. The firms and the technologies they will be demonstrating include:

C Allegro Microsystems Inc., Worcester, will be testing a system that recycles spent process water by using new technology in concert with existing equipment to produce ultra pure water that meets their specifications. The semiconductor manufacturer's membrane and ion exchange-based system is applicable to a variety of manufacturing processes.

C Lab Medical Engineering & Manufacturing Inc., North Billerica, which manufacturers stainless steel products for the medical industry will demonstrate stainless steel passivation via plasma. Lab Medical worked with OTA to develop this innovative TUR technique. TURI's Surface Cleaning Laboratory also helped them to replace a toxic organic removal chemistry with a cleaning system that is more environmentally and occupationally safe.

C Textron Systems Inc., Wilmington, a defense systems contractor, will be testing a two-stage process that includes recovery of machining fluids and reuse of water from that process, in addition to reuse of the machining fluids.

C Milestone Inc., Springfield, will be demonstrating organic coating removal via sodium bicarbonate crystal blasting. This process replaces solvents traditionally used to clean tank interiors and other surfaces.

“These companies represent a wide range of industrial operations that should be of great interest to industries, consultants, and technical assistance agencies,” said Christopher Ford, manager of TURI's Demonstration Sites program. Site visits will be held at the companies throughout March. OTA, DEP, Executive Office of Environmental Affairs, EPA Region 1, and the MA Manufacturing Partnership are associate sponsors of the program. For information contact Chris Ford (978) 934-3142.

**TUR Networking Grants Program**

TURI has awarded eight Toxics Use Reduction Networking (TURN) Grants to municipalities and community organizations for 1999. The program was established by the Institute in 1995 to encourage involvement by community organizations and municipalities in the state's Toxics Use Reduction Program. Two types of grants are awarded under the TURN program: community awareness projects designed to raise awareness and understanding of TUR; and municipal integration projects that foster implementation and incorporation of TUR/P2 strategies into local municipal activities and functions.

The 8 projects funded in FY 1999 are among 33 TURN projects over the past four years that serve as models for citizen, government, business and worker partnerships promoting a more sustainable economy and environment in communities across the state. This year's projects include:

Community Awareness Grants:

C Alternatives for Community & Environment, Roxbury, Healthy Hair Campaign to Reduce the Use of Toxics in Neighborhood Hair Salons

C Regional Environmental Council Inc. (REC),
Worcester, Pollution Prevention in Worcester Neighborhoods: A Focus on Auto Body Shops. Partners: Centro Las Americas and Webster Square Business Association (Greater Worcester Chamber of Commerce)

C Marblehead Pesticide Awareness Committee, Marblehead, A Living Lawn...A Lawn for Living. Partners: Marblehead Recreation & Parks Department, Marblehead Environmental Coalition, and Marblehead Board of Health

C Massachusetts Coalition for Occupational Safety and Health, Inc. (MassCOSH), Jamaica Plain, Using TUR Roundtables to Build Labor and Community Partnerships in Lawrence and Lynn. Partners: North Shore Central Labor Council and Independent Laundry Workers Union, Local 66L

Municipal Integration Grants:

C Dracut School System, Dracut, Environmental Science Toxics Use Reduction Program

C Barnstable County Department of Health and the Environment, Barnstable, What Can We Do Tomorrow to Reduce Toxics in Our Schools? A How-To Approach. Partner: Burlington Board of Health

C Franklin County Solid Waste Management District, Greenfield, Implementing Solutions: Solvent Use Reduction in Municipal Facilities

C Hoosac Water Quality District, Williamstown, Small Business and TUR: Keeping Our Communities Green and Clean. Partner: Altair Systems

For information contact Patricia Gittes (978) 934-3129.

NEW HAMPSHIRE

NEW HAMPSHIRE DES

Staff Update

After many years of dedicated P2 service, NHPPP Manager, and "founding father" of the P2 Program, Vince Perelli, is leaving the program to become the Departments' Chief Environmental Planner. As such, Vince will be heading up a number of department-wide initiatives, including: strategic planning; putting together the performance partnership agreement; and writing the state of NH's environment report. P2 Program staff will miss Vince very much and thank him for all that he has done to advance P2 in the state and the region. We wish him luck in his new, very challenging position!

Mercury Reduction Activities

Mercury reduction activities have been an important component of NHDES and P2 Program staff activities over the past several months. In October 1998 Governor Shaheen announced the publication of the NH Mercury Reduction Strategy at a press conference at the Manchester Waterworks facility. The Strategy, which was drafted by NHDES, emphasizes source reduction and contains 40 recommended actions to reduce in-state sources of mercury contamination. In addition, NHDES has two mercury-related bills being considered this legislative session. One bill will set stringent emissions limits at the state's two largest municipal waste combustors, and the other will establish a legislative committee to study and make recommendations on reducing mercury in the solid waste stream.

NHDES and the Foundation for Healthy Communities sponsored a conference on "Greening New Hampshire Hospitals" in December 1998. Conference topics included regulatory and compliance issues, mercury, and other toxics reduction, waste management strategies and strategies for minimizing red bag waste. The key note speaker, Ted Schettler, MD of the Greater Boston Physicians for Social Responsibility, gave an inspirational presentation on "Hospitals, Public Health, and the Environment: A New Social Contract." Several DES staff helped organize and/or presented at the conference. NHDES has applied for a PPIS grant to continue mercury reduction work with hospitals, and to do similar work with schools and dentists. For more information contact Stephanie D'Agostino (603) 271-6398 or s_dagostino@des.state.nh.us.

For more information contact: Patricia Gittes (978) 934-3129.
Annual Pollution Prevention Conference

The Seventh Annual New Hampshire Pollution Prevention Conference will be held on Monday, April 5, at the University of New Hampshire, New England Center in Durham. This year's conference theme is "Pollution Prevention and the Bottom Line!" Conference topics to be presented will include: P2 planning in NH; environmental management systems; environmental supply chain management; climate change and energy efficiency; energy efficiency case studies; water conservation; risk management planning; chemical inventory management; and legislative updates. Invited keynote speakers include Governor Jeanne Shaheen, NH Department of Environmental Services Commissioner Robert Varney, US Environmental Protection Agency Region 1 Administrator John DeVillars, and Business and Industry Association Chair Stuart (Mike) Smith, Jr., former CEO of Dartmouth Printing.

P2 Planning Guide Available

The DES Pollution Prevention Program is proud to announce Planning for Profits...A Guide to Pollution Prevention for NH Businesses. The guide is designed to help companies reduce waste at its source -- before it becomes a pollutant or lost resource. For a copy contact (603) 271-6460, or e-mail nhppp@des.state.nh.us.

Pollution Prevention Internship Program

Over the last five summers, 35 New Hampshire companies and 60 University of New Hampshire chemical engineering students worked on pollution prevention projects. The Internship Program teams engineering students with interested companies to work on P2 projects over the summer. The interns receive a 14-week training program at UNH (currently in progress), a stipend for the 10-week placement, intern support activities, and extensive UNH/DES intern oversight during the project period. To date, companies have reported combined cost savings of over $2 million!

DES Green Team

The results are in! Green Team members and DES volunteers, with the help of the cafeteria staff, composted 5,283 pounds of pre-consumer food waste last year. Composting activities started on Earth Day, April 22 and continued until December 22, 1998 when composting was terminated for the season due to weather conditions. The finished compost will be given away during Earth Day 1999 activities. The Green Team has completed a pilot test of 100 percent recycled, processed chlorine free (PCF) paper for use at NHDES and the Department is considering agency-wide use of PCF paper. The group is looking for other organizations or businesses that are currently using or considering PCF paper. If readers have a life cycle analysis of PCF paper, contact the NHPPP to share this information.

NHDES Adds Two Electric Vehicles to Fleet

A Solectria Force electric car and a GM S-10 electric truck are the most recent additions to DES's vehicle fleet. They are two of the four vehicles purchased to demonstrate the capabilities of alternative fuel vehicles in reducing auto emissions and promoting energy efficiency. The car's range is approximately 25 to 40 miles on one charge, using approximately $0.75 worth of electricity. The truck's range is approximately 40 to 60 miles on one charge, using approximately $1.50 worth of electricity. These figures represents a tremendous energy savings. In fact, the overall system energy efficiency of the vehicles, including power plant efficiency, are about twice that of conventional, gasoline-powered cars. Further, emissions associated with power plant generation of electricity are estimated to be less than five percent of those from conventionally-powered vehicles.

For more information contact: Stephanie D’Agostino (603) 271-6398, S_dagostino@des.state.nh.us or Vincent Perelli (603) 271-2902, perelli@deswmdpl.mv.com.

NEW YORK

NEW YORK STATE DEC

Lake Champlain Basin Mercury P2 Project

DEC is working with the National Wildlife Federation, the State of Vermont, and the Dental Association on a project to establish a mercury pollution prevention program targeted at the dental community in the Lake Champlain Basin. The project is developing educational materials that will be mailed to all dentists in the Lake Champlain Basin. DEC is also working to provide additional outreach to the dental community in this area for a one-time collection and disposal of elemental mercury.

Great Lakes Basin Mercury Study

A New York State Great Lakes Basin Mercury Source Inventory has been developed and submitted to EPA. Data for this inventory were compiled from many different data sources including existing permit
information, federal and state emission factors, stack test results, annual waste generator reports, and the EPA Mercury Study Report to Congress. Medical waste incinerators have been selected as the sector that has significant potential for mercury source reduction. A program to educate and assist this industry in mercury source reduction activities is being developed.

**National Strategic Goals – Metal Finishing Sector**

DEC’s participation in this program has involved meetings and conference calls with EPA Region 2 and Headquarters and both upstate and downstate groups of metal finishers. These meetings have involved discussions of goals, project time lines, and program guidance.

**P2 Conference & Governor’s Awards**

The 12th Annual New York State P2 Conference will be held in Rochester on August 24 -26, 1999. The Governor’s Awards applications are now available and the deadline for applying this year is June 1, 1999. Awards will be presented at the Conference.

For more information contact: Mary Werner (518) 457-2553, mhwerner@gw.dec.state.ny.us

**NEW YORK STATE SMALL BUSINESS ASSISTANCE PROGRAM (SBAP)**

**Guide to Hiring a Consultant**

The SBAP has developed a 32-page guide to help small businesses that need to hire an environmental consultant. The guide takes the business through the whole process of resolving their environmental problem with the help of a consultant, from assessing their needs, to finding consultants; from soliciting and reviewing proposals, to negotiating the contract.

**Newsletter Survey**

In the fall/winter issue of Clean Air News, the SBAP’s technical newsletter, the SBAP solicited feedback from readers with a postage-paid survey. Out of approximately 4000 copies distributed, 52 readers responded. Half of the respondents were small business owners or employees. Of these, 73 percent indicated that the newsletter was just the right length, and 77 percent thought the articles contained just the right level of technical detail. When asked if the articles help them comply with the Clean Air Act, 58 percent said the articles frequently or always help them comply, and 35 percent said the articles sometimes help them comply. Fifty-six percent of the small businesses sometimes make changes to their operations based on what they read in Clean Air News, and 30 percent frequently or always make changes based on Clean Air News. The newsletter is presently published twice yearly, but 69 percent of the small businesses indicated they would like to see 4 issues each year, which the SBAP is evaluating. And when asked their overall satisfaction with the newsletter, 92 percent were mostly or completely satisfied.

**Hotline Activity**

In December and January, the SBAP experienced a surge in technical assistance hotline calls, largely as a result of a mailing by the Department of Environmental Conservation (DEC) to sources that needed to indicate whether or not they were subject to Title V permitting. DEC’s letter directed businesses to call either the SBAP or the Small Business Environmental Ombudsman for assistance. Normally, the SBAP responds to approximately 100 calls to its hotline each month. In December, the SBAP received 211 calls (71 from those who received the DEC letter) and in January the SBAP responded to 184 callers (88 of whom received the DEC letter).

**Workshops for Contractors of Vapor Barrier Room Enclosures**

New York State's revised regulation for perchloroethylene (perc) drycleaners, Part 232, requires facilities that share a common wall, floor, or ceiling with another business or a residence ("mixed-use") to install a vapor barrier room enclosure and ventilation system to contain and exhaust perc vapors. After receiving numerous calls from construction contractors seeking information on how to comply with the requirements, the SBAP decided to provide this information via technical workshops for groups of interested contractors in three locations across the state. The workshops are scheduled for March.

For more information contact: Tria Case (212) 803-02280.

**ERIE COUNTY OFFICE OF POLLUTION PREVENTION**

**Mercury P2 Education**

Through the Mercury P2 Program, the Erie County Office of Pollution Prevention continues to educate the public on common sources of mercury and the environmental impact of mercury pollution through outreach to two general audiences: community and business. Community education consists primarily of outreach to local educators and participation in community events. Teacher resource/information
packets have been distributed to schools and follow-up will offer opportunities for staff presentations to classrooms. A mercury information and product display board supplements distribution of resource materials at various community events. County sponsored thermometer exchanges have provided the basis for building partnerships between project staff, the schools, and other community organizations. The thermometer exchanges and other community outreach efforts have resulted in the collection of over 500 mercury thermometers and 300 pounds of elemental mercury, which has been recycled through the County's Household Hazardous Waste Program.

Business education entails development and implementation of a Dental Mercury Waste Management Initiative for the Western New York dental community. To date, progress consists of an agreement for a bulk mercury collection program and an education/outreach campaign regarding non-contact amalgam. For more information contact Mary Rossi (716) 858-7583.

**Project Protect: Risk Management**

Erie County has opened a new resource center to assist local facility managers in complying with an upcoming federal Clean Air Act Section 112(r) deadline. The resource center contains guidance manuals and computer programs to help facilities develop the Risk Management Plans required by the regulation, which must be submitted by June 21, 1999. Facilities that exceed the threshold quantity of one or more of the 140 toxic or flammable chemicals listed in the regulation must comply. Common chemicals, such as ammonia, chlorine, and propane, are included in this list, therefore many facilities will be subject to this regulation.

The resource center is part of a new Erie County project, called Project PROTECT, which provides technical assistance for facilities through its PROactive TECHnical Team (PROTECT). This team consists of members of the Erie County Local Emergency Planning Committee (LEPC), and staff from the Erie County Departments of Emergency Services, and Environment and Planning. The project also offers training, workshops, on-site visits, and plan reviews. The project is funded by the EPA, through the State of New York Emergency Response Commission (“SERC”), and is designed to further local chemical accident prevention initiatives in the region. For more information contact Tom Hersey (716) 858-7674.

**Construction & Demolition (C&D) Debris Recycling**

Supported through a grant from the NYS Empire State Development, Office of Recycling Market Development, this program assists municipalities and private companies in recycling C&D material. Since 1997, over 13,000 tons of C&D materials have been directed to recycling markets through this program. Examples of projects include:

- **Town of Amherst Ice Rink C&D Project:** During the site plan review process, the Town required that the contractor recycle as much C&D debris as was economically feasible. This project yielded over 2200 tons of material.
- **The Town of West Seneca Madison Wire Project:** Through the C&D Recycling Project, the County provided bid specification language to require C&D recycling in the demolition of this large industrial park. This project yielded over 9000 tons of material.
- **Village of Hamburg Curbside C&D Collection:** During 1998, the Village recycled 26 tons of rubble saving the Village over $1,000.
- **Habitat for Humanity:** Through the C&D Recycling Project, the County arranged for Habitat to recycle dry wall and concrete rubble for a one year. The recyclers markets, Gyp-Pack and CTS Crushing are collecting the material as a service to Habitat. For more information contact Susan Attridge (716) 858-6339.

**Third Biennial Great Lakes Student Summit**

The Great Lakes Student Summit is an international conference for students in grades 5-9 to explore the diverse issues affecting the Great Lakes basin ecosystem and to provide an opportunity for showcasing student research projects. The conference will include presentations, field-trips, hands-on demonstrations, and student project sharing sessions.

Erie County will be hosting the 1999 Great Lakes Student Summit on May 12-14, 1999 at the Buffalo Convention Center in Buffalo, New York. For more information contact Jill Spisiak (716) 858-8846 e-mail spisiakj@cdbg.co.erie.ny.us.

**Rhode Island**

**NARRAGANSETT BAY COMMISSION**

In recent years the U.S. Environmental Protection Agency, particularly Region I, has developed many initiatives designed to reinvent environmental regulatory
approaches. Programs have been put in place and great effort is being made to establish partnerships between industry and government with both working toward the same goal of developing common sense and cost effective ways of obtaining a clean environment without hampering economic growth. The Narragansett Bay Commission (NBC) is involved with three such programs: Metal Finishing 2000, CLEAN-P2 Regulatory Relief, and most recently, NBC's Metal Finishing Guidance Manual Seminar Series.

In December of 1996 the Surface Finishing Industry Council (SFIC) published the “Metal Finishing Guidance Manual” as part of the National Common Sense Initiative (CSI). Written by the Eastern Research Group with assistance by GZA Geo-Environmental, Inc., this extensive document contains detailed information on pollution prevention, environmental compliance, and safety procedures specifically for the metal finishing industry. The manual consists of the following sections and topics:

- Air Emissions
- Wastewater discharges
- Storm-water Discharges and Oil Spill Prevention
- Hazardous Waste
- Underground Storage Tanks
- Toxic chemical Reporting
- Emergency Planning and Notification
- Toxic Substance Control
- Pollution Prevention
- Environmental Management Systems
- Environmental Accounting
- Superfund and Contaminated Property Management

Recognizing the value and importance of this environmental compliance guide, the NBC applied for and was awarded a $35,000 EPA grant to develop and present a series of seminars utilizing this manual. These seminars are being held at convenient locations within Rhode Island and are typically two to three hours in duration. The manual, if purchased through SFIC, is priced at $275 to $295, depending on the number of copies purchased. Through NBC’s Metal Finishing Guidance Manual Seminar Series, the price per manual is $70 (a limited number of manuals are being made available to NBC’s metal finishing industry at this price).

The schedule of seminars is as follows:

C Wednesday, January 13, 1999: Introduction & Hazardous Waste Management
C Thursday, February 25, 1999: Emergency Planning Notification Tier I & II
C Thursday, May 13, 1999: Toxic Chemical Reporting Form R EPRCA 313
C Wednesday, June 23, 1999: Wastewater Discharges
C Thursday, September 16, 1999: USTs and Oil Spill Prevention
C Thursday, January 13, 2000: Hazardous Waste Reporting

For more information contact: James McCaughey, (401) 222-6680 x352.

THE NORTHEAST WASTE MANAGEMENT OFFICIALS’ ASSOCIATION

The Northeast Waste Management Officials’ Association (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 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:
C facilitate communication and cooperation among member states and between states and EPA, and
C promote the efficient sharing of state and federal program resources.

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: (1) NE P2 Roundtable meetings and workgroups; (2) regional P2 information resource center and databases of information; (3) source reduction research and publications; (4) training sessions; and (5) regional policy coordination and development. The NE P2 Roundtable is supported by NEWMOA member

VERMONT

VERMONT DEC
Workshops for Municipal Garages

The Environmental Assistance Division is working on an outreach project to municipal garages with the EPA Region I NEATeam. Nine workshops will be held around the state in May and June. The half-day workshops will address P2 and best management practices as well as compliance with environmental requirements, such as floor drains, waste oil burning, and waste handling and storage. The workshops are being planned and sponsored in conjunction with the Vermont League of Cities and Towns, the Vermont Local Roads Program, and the Vermont Agency of Transportation.

P2 Plans Due

This July, Vermont small and large quantity generators and toxics users will be required to complete the third round of three-year P2 plans. There are currently about 170 facilities subject to the planning requirements. The Pollution Prevention Planning Procedure document has been revised for this planning cycle. This year the DEC is providing an EMS alternative to the three year plan (see pp. 3-4 of this newsletter for more details). Facilities that are certified to ISO 14001 standards or have completed an EMS as a part of DEC’s pilot EMS design and implementation training program can substitute this documentation for the plan under certain conditions.

P2 Guide for Wood Products Firms

The DEC is completing a P2 and environmental compliance guide for the wood products and wood finishing industries, complete with compliance audit checklists. A guide for metal fabrication and finishing is planned for later this year.

Mercury Reduction Initiatives

The DEC has several mercury reduction initiatives underway and planned for this year. Mercury-added products of certain types are required to be labeled if manufactured after July 1, 1999. Manufacturers of mercury-added products in the following categories are being identified and notified of their obligations under Vermont law: thermostats; thermometers; electrical switches, relays and other devices; lamps; batteries; and medical or scientific instruments. Regulations were also promulgated in January for labeling. Products that cannot be directly labeled must apply for an alternative labeling method.

A project to clean out mercury and other hazardous chemicals from about 100 Vermont schools is scheduled to begin by July. This multi-year project will also require schools to adopt management plans and receive on-site training to avoid future use of mercury. The Vermont Health Department will be sponsoring workshops this year on mercury in schools, including prevention and remediation. The Department of Agriculture is seeking funds this legislative session to collect mercury manometers from dairy farms and to replace them with mercury-free manometers.

The Environmental Assistance Division is developing educational materials on mercury products and proper handling and recycling/disposal methods to coincide with the ban on labeled mercury products from solid waste landfills. Educational materials will be targeted to households and consumers, plumbing, heating and electrical contractors, retail establishments, and other businesses that may generate mercury-containing wastes. In conjunction with the state’s Mercury Advisory Committee, a media campaign involving the Governor is being planned for this spring to raise awareness about mercury, the labeling requirements, handling requirements, landfill bans, and special initiatives in schools and healthcare settings.

In conjunction with EPA New England’s Partners for Change: Mercury Challenge, Vermont DEC is offering a Mercury and Dioxin Challenge to 19 hospitals and health care facilities as a part of its Vermont Business Environmental Partnership. Under this program, participants will receive recognition and assistance in meeting a set of core and elective environmental management standards that focus on mercury reduction and elimination as well as reduction of PVC destined for combustion. Facilities will also be required to develop a written environmental management plan to identify and implement viable alternatives to mercury-containing and PVC plastics.

For further information contact: Gary Gulka (802) 241-3626 or Doug Kievit-Kylar (802) 241-3628; gary.gulka@anrmail.anr.state.vt.us, doug.kievit-kylar@anrmail.anr.state.vt.us

EPA REGION I

Hospital Outreach

Janet Bowen leads Region I’s outreach efforts to hospitals on mercury reduction, and works closely with Jeri Weiss on EPA’s overall mercury efforts. Janet’s focus is the Mercury Challenge program, modeled on EPA’s Partners for Change program. With state P2 programs and other partners, Region I will support hospitals in taking on the challenge through workshops, on-site assistance, and tools for identifying alternative
products. Five PPIS grants to be awarded in FY99 in NE focus on assistance to health care facilities in reducing mercury and other problematic substances. Region I is coordinating with EPA HQ's P2 Division's work with the American Hospital Association. For more information contact Janet Bowen (617) 918-1795.

**P2 Template Project**

Abby Swaine and Carol Kilbride of EPA Region I, along with Paul Richard of MA STEP and Terri Goldberg of NEWMOA, have been leading the effort to promote the use of EPA's P2 Technology Application Analysis Template among Region I state programs and other groups. Representatives from all NE states will meet in March to pursue setting up a committee under the New England Interstate Regulatory Cooperation Project to use the Template to evaluate products within a selected class of P2 technology that is likely to be of interest to facilities in the near future and potentially seen in permit applications to state agencies. For more information contact Abby Swaine (617) 918-1841.

**Project XL**

Formerly of MA OTA, George Frantz has joined EPA Region I to lead the XL program. He has two XL projects underway (HADCO and MA ERP), two close to adoption (Univ. Lab. Consortium and International Paper) – and several in the wings. For more information contact George Frantz (617) 918-1883.

**Workshops for Municipal Garages**

In Spring 1999, EPA Region 1, in coordination with VT DEC and NH DES, will be hosting a series of workshops in both states to educate municipal highway garages about environmental regulations and pollution prevention opportunities. Four workshops will take place in NH in April, and eight workshops will take place in VT in May as follows: NH: Concord (4/20), Littleton (4/22), Exeter (4/27), Keene (4/29); VT: St Albans (5/6), Claremont (5/11), Windsor (5/18), Dummerston (5/20), Colchester (5/25), Dorset (5/27), Derby (6/2), Lyndon (6/3), Berlin (6/9). Later on, similar events may take place in RI. For more information contact Chris Jendras (for VT) (617) 918-1845, Jack Healey (for NH) (617) 918-1844, or Abby Swaine (for RI) (617) 918-1841.

**On-Site Assistance to Voc-Tech Schools**

Lee MacMichael, Joan Jouzaitis, Mary Dever and Peggy Bagnoli are providing on-site compliance and P2 assistance at many vocational schools, most recently in Northern Maine. School programs assisted range from automotive to horticulture, and topics covered range from liquids management to selecting less hazardous spray paints. For more information contact Lee MacMichael (617) 918-1847.

Mary Dever and Peggy Bagnoli of Region I are assisting MA OTA in giving several local CRASH Course Auto Body compliance/P2 workshops this Spring. For more information contact Mary Dever (617) 918-1717.

**Municipal Demonstration Projects**

Susan Kulstad of Region I is coordinating a series of Municipal Demonstration Project events. At a January 26 workshop in Centerville, MA, Mary Dever of Region I and Marina Brock of the Barnstable County Health Department taught 75 fire and health officials from two counties about hazards found at auto repair facilities and the role of municipal officials in auditing such facilities. An April 14th workshop in Hadley MA will focus on the metal finishing and auto repair/refinishing sectors. For more information contact Mary Dever (617) 918-1717.

**Compliance at Schools Conference**

Joan Jouzaitis has organized a one-day conference "Is Your School in Compliance: Achieving and Going Beyond Compliance With Environmental Regulations in an Academic Setting" for March 24 in Boston, cosponsored by Harvard. For more information contact Joan Jouzaitis (617) 918-1846.

**Wood Coaters Video**

Region I’s 30-minute video "Making P2 Work for You: Opportunities for Wood Coaters" is complete and will be advertised in March as available free of charge to approximately 3500 wood products manufacturers and others. Each NE state program will receive free copies to distribute. Producer Dan Porter of the Ctr. for Educational Media (Portland, ME) did an excellent job! For more information contact Abby Swaine (617) 918-1841 or Janet Bowen (617) 918-1795.

The Wood Coating Technology Fair held on November 18, 1998 was fully subscribed at 200 participants and received enthusiastic reviews. For more information contact Abby Swaine (617) 918-1841 or Janet Bowen (617) 918-1795.

**Outreach to RI Metal Finishers**

Mark Mahoney and Linda Darveau are working with RI DEM and other partners to implement the Metal Finishing Strategic Goals Program in Rhode Island. Materials generated by this project that might be of
interest to other states include RI's new evaporator policy, the Metal Finishing 2000 application, and the RI Brownfields Prevention Manual.

**Climate Change Action**

Norman Willard continues to head up Region I's Climate Change program. Special emphases in NE include effects on cold water fisheries and the joint EPA/GSA/DOE "Tread Lightly" program to reduce federal facilities' climate impact, which includes an effort to encourage all NE federal facilities to choose the "green power" package from the GSA-selected energy vendor. EPA Region I's own efforts in the Tread Lightly program will focus on a three-year goal for reducing the CO2 generated by the Agency's day-to-day operations, including energy use and solid waste generation. Norman is also working with Joe DeCola on promoting the Million Solar Roofs initiative in NE and trying to get solar panels installed on EPA's Boston office building. For more information contact Norman Willard (617) 918-1812 or Joe DeCola (617) 918-1803.

**For more information contact:** Abby Swaine (617) 918-1841.

**EPA REGION II**

The Council on the Environment of New York City, under a cooperative agreement with EPA Region II will be releasing a booklet this spring on pollution prevention for the general public. Entitled, “You Can Change the World” the booklet will provide tips on prevention opportunities in several sectors. It will be designed and printed in both English and Spanish.

**For more information contact:** Evans Stamataky (212) 637-4003.

**NORTHEAST STATES P2 ROUNDTABLE**

**Mercury-Containing Products Summit**

NEWMOA organized a Mercury-Containing Products Summit in January outside of Hartford, Connecticut to begin the development of a regional strategy to reduce mercury in products and promote safer waste management for products that contain mercury. The objects of the Summit were:

C Identify the positions of different stakeholders

C Share information on existing programs and legislation that are having a positive impact on reducing mercury in the solid waste stream

C Begin to generate regional strategies for reducing mercury in products and wastes

Connecticut Governor John G. Rowland was the keynote speaker at the Summit urging the participants to work with the states to help achieve the regional goal of “virtual elimination of the discharge of anthropogenic mercury into the environment.” The Summit was co-sponsored by the New England Governors’ Conference, Northeast States for Coordinated Air Use Management, New England Interstate Water Pollution Control Conference, and EPA Region I-New England.

Over 140 people attended the Summit, including representatives from manufacturers, environmental organizations, municipal waste combustor operators, and government agencies. There were a number of lively discussions in which participants exchanged ideas and made recommendations to the states for future action. Summit notes are available by contacting NEWMOA.

**Proposed P2 Metrics Menu**

As a follow-up to the recently published report, *Pollution Prevention Progress in the Northeast*, the Northeast states are collaborating on developing a menu of pollution prevention metrics for state and local programs to use in assessing their P2 activities. The purpose of the menu is to provide some simple common metrics for states to use in tracking their work. Most of the metrics focus on program activities, but a few would...
The states have formulated a draft menu that will be discussed and revised at a March meeting of the Northeast States Pollution Prevention Roundtable.

NEWMOA Web Site

NEWMOA is developing a web site that will have a particular emphasis on pollution prevention. The Association is seeking advice and suggestions on what types of information state and local P2 programs would be interested in having on the web site. The site will include a database directory of state and local P2 contacts, a projects database, the NEPPR newsletter, workgroup contacts, and other related information. Please contact NEWMOA to offer suggestions for what should be posted on the web site.

Report on OECA Compliance Assistance Centers

NEWMOA is finalizing a report on the results of a survey on how useful three of EPA’s Compliance Assistance Centers – auto repair, metal finishing and printing – have been in helping technical assistance providers give compliance information to their clients. Information for this report was gathered via mail and internet surveys, phone interviews, and focus group meetings. The final report will address such issues as the value of the federal government sponsoring external parties to maintain Internet-based programs to assist the technical assistance provider community. Recommendations will be made regarding the other information activities of the Centers. The report will be available this spring.

Metal Finishing Slide Show

NEWMOA has completed the development of a slide show on RCRA compliance for metal finishing firms. The slide show focuses on common RCRA violations that inspectors routinely find at metal finishing firms in the Northeast. The slide show also demonstrates that the best way to avoid compliance problems is through waste reduction/pollution prevention. It includes a number of specific P2 suggestions for metal finishers interested in reducing their hazardous waste generation. NEWMOA can make the slide show available for metal finishing trade association events, P2 and compliance assistance meetings and conferences, and other events.

For more information contact: Terri Goldberg (617) 367-8558 x302.

NEW P2 PUBLICATIONS

NEWMOA has a part time librarian, John Bearley, on staff now. He can help readers with requests for information on a wide variety of waste and pollution prevention questions. He has access to numerous databases and other information sources. He is also masterful at searching the Internet for relevant material. If you would like some assistance with answering a question, tracking down information, or searching the web, contact John (617) 367-8558 x 305.

New Documents Available from EPA’s P2 Information Clearinghouse

Documents can be ordered through the PPIC Online Order Form or by contacting PPIC, U.S. Environmental Protection Agency (Mailcode: 7407); 401 M Street, SW (7407); Washington, DC 20460; Reference and Referral: (202) 260-1023; Fax Line: (202) 260-4656; E-mail Address: ppic@epa.gov. The following EPA documents and fact sheets are available at no cost.

Presidential Green Chemistry Challenge Awards Program: Summary of 1998 Award Entries and Recipients
EPA/744/R-98/001 (77 pp) November 1998. This document provides a collection of summaries of the entries received for the 1998 Presidential Green Chemistry Challenge Awards. It also highlights the five green chemistry technologies selected to receive the 1998 Awards. Web Site: http://www.epa.gov/greenchemistry/past.htm

Consumer Labeling Initiative (CLI) Fact Sheet
EPA/742/F-98/022 (2 pp) December 1998. This document serves as a general information source for the CLI. It includes the objectives, background research process, and projects underway. Web Site: http://www.epa.gov/opptintr/labeling

Greenhouse Gas Emissions from Management of Selected Materials in Municipal Solid Waste
EPA/530/R-98/013 (120 pp) September 1998. This report integrates a wealth of information on greenhouse gas implications of various MSW management options for some of the most common material in MSW and for mixed MSW and mixed recyclables.

Draft Multimedia Strategy for Priority Persistent, Bioaccumulative, and Toxic (PBT) Pollutants
EPA/742/D-98/001 (29 pp) November 1998. The goal of this strategy is to further reduce risks to human health...
and the environment from existing and future exposure to priority persistent, bioaccumulative, and toxic (PBT) pollutants. The EPA has developed this draft strategy to overcome the remaining challenges in addressing priority PBT pollutants. The pollutants pose risks because they are toxic, persist in ecosystems, and accumulate in fish and up the food chain. Web Site: http://www.epa.gov/pbt/pbtstrat.htm

Draft Multimedia Strategy for Priority Persistent, Bioaccumulative, and Toxic (PBT) Pollutants Fact Sheet

Draft Mercury Action Plan

Draft EPA Action Plan for Mercury Fact Sheet
EPA/742/F-98/023 (2 pp) November 1998. This fact sheet describes the Agency's action plan for addressing mercury as part of the overall multimedia PBT strategy. Web Site: http://www.epa.gov/pbt/hgfacts.htm

New Documents Available from the Joint Services P2 Technical Library
These documents are from the Joint Group on Pollution Prevention (JG-PP) element that was established to overcome duplication of efforts in changing military specifications/standards and budget constraints for P2, and to establish common test protocol acceptance of alternatives. The Library is accessible at http://enviro.nfesc.navy.mil/p2library/cd/

Potential Alternatives Report for Alternatives to Chromate-Containing Primers for Aircraft Exterior Mold Line Skins
May 1998. Chromate primers are used to increase corrosion resistance and improve paint adhesion. These primers are most commonly applied to aluminum alloys, but other substrates, such as steel, composites, and titanium, are also coated by these primers. This Report provides analyses of identified alternatives to chromate primers and a list of those alternatives selected for testing. Web Site: http://www.jgpp.com/potalts.htm

Potential Alternatives Report for Alternatives to Lead-Containing Dry Film Lubricants for Antigalling/Antifretting, Antiseizing, and Assembly Aid Applications
September 1998. Many of the dry film lubricants (DFLs) currently used by manufacturers contain lead or other materials that cause environmental or health concerns. This Report provides technical analyses of identified alternatives to the current DFLs, criteria used to select alternatives for further analysis, and a list of those alternatives recommended for testing. Web Site: http://www.jgpp.com/potalts.htm

Potential Alt. Report for Alternatives to Solvent-Based Ink Stenciling for Identification Marking
July 1998. Some of the solvents present in baseline ink formulations, as well as the liquid and solid wastes generated as a result of using these ink formulations, are considered to be hazardous and are subject to environmental regulation. This Report provides an analysis of identified alternatives to solvent-based ink stenciling and a recommendation of the alternatives to be tested. Web Site: http://www.jgpp.com/potalts.htm

New Products Available from the Air Force Center for Envir. Excellence (AFCEE)
The P2 Directorate supports P2 and compliance programs world-wide. The Directorate identifies P2/compliance opportunities; develops and executes strategic initiatives to identify and implement solutions to common Air Force P2 and compliance problems; and feeds information on successful programs, good ideas, and "best technologies" from throughout the Air Force and other federal agencies. For additional information contact: AFCEE Public Affairs (210) 536-3072.

1998 AFCEE Pollution Prevention Resource CD

Air Force Pollution Prevention (P2) Toolbox
The Toolbox provides access to handbooks, guides,
training software, and videos related to the P2 process. They are organized according to which stage of the P2 process they belong. Web Site: http://www.afcee.brooks.af.mil/eq/p2toolbox/home.htm

Other New Documents

NPPC Pollution Prevention Curricula ONLINE
The National Pollution Prevention Center has put almost all of their original NPPC materials online including a new “Sustainable Architecture Compendium.” Many available in Adobe Acrobat format (.pdf file). Web Site: http://www.umich.edu/~nppcpub/resources

Searching for the Profit in P2: Case Studies in the Corporate Evaluation of Envir. Opportunities
(44 pp) May 1998, by James Boyd. Published by Resources for the Future; Washington, DC. While anecdotal evidence suggests that P2 opportunities exist and that many have been pursued, there is also the perception that the pace of P2 is far too slow. To explore that claim— and to shed light on barriers to P2 innovation— this paper presents case studies of industrial P2 projects that were in some way unsuccessful. Based on evidence from the cases, the paper concludes with a discussion of environmental policy reforms likely to promote P2 innovation. Available in Adobe Acrobat format (.pdf file). Web Site: http://www.rtf.org/reports/1998.htm

Waste Programs P2 Compendium
(75 pp, 329 pp) May 1998, by John Iannotti. Published by Association of State and Territorial Solid Waste Management Officials; Washington, DC. Phone (202) 624-5828. This report illustrates the activities that state solid and hazardous waste programs are undertaking to integrate P2, in two volumes.

A Benchmarking Study of P2 Planning: Best Practices, Issues, and Implications for Public Policy
(52 pp) August 1998. Published by The Business Roundtable; Washington, DC. Phone (202) 872-1260. The purpose of this study was to examine best industrial practices in P2 planning, explore the impact mandated planning, and identify implications for planning laws in light of these findings.

A Guide to Improving Regulatory Results...Using Pollution Prevention
(16 pp) October 1998. Published by the Pacific Northwest P2 Resource Center; Seattle, WA. Phone (206) 223-1151. An overview of integration tips to bring P2 deeper into agency programs.

Automotive P2 Project: Final Progress Report


"Greening" Hospitals: An Analysis of P2 America's Top Hospitals
(45 pp) October 1998, by Todd Hettenbach. Published by Health Care Without Harm; Falls Church, VA. Phone (703) 237-8389. This study draws on survey results obtained from 50 of the nation's top hospitals.

Mercury-Added Products in Maine's Solid Waste
(38 pp) December 1998, by John Batsey. Published by Environmental Management; Hallowell, ME. Phone (207) 622-4036. This report is an effort to put some numbers to the amount of mercury disposed of in the solid waste stream.
<table>
<thead>
<tr>
<th>Title</th>
<th>Sponsor</th>
<th>Date/Location</th>
<th>Contact</th>
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<tr>
<td>Water Recycling &amp; TUR</td>
<td>MA TURI</td>
<td>March 10, 12, 19–Worcester, MA</td>
<td>(978) 934-3050</td>
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<td>Organic Coating Removal via Sodium Bicarbonate Crystal Blasting</td>
<td>MA TURI</td>
<td>March 16–Springfield, MA</td>
<td>(978) 934-3050</td>
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<td>Second AICHE Topical P2 Workshop</td>
<td>AIChE</td>
<td>March 18-19, Houston, TX</td>
<td>(206) 528-3290</td>
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<td>Plasma Passivation of Stainless Steel</td>
<td>MA TURI</td>
<td>March 25–N. Billerica, MA</td>
<td>(978) 934-3050</td>
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<tr>
<td>Toxics Use Reduction Planner, Full-Day Continuing Ed. Conference</td>
<td>MA TURI</td>
<td>March 25–Taunton, MA</td>
<td>(978) 934-3050</td>
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<td>Toxics Action ‘99</td>
<td>Toxics Action Ctr.</td>
<td>March 27-28–Newton, MA</td>
<td>(617) 292-4821</td>
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<td>New Hampshire P2 Conference</td>
<td>NH DES</td>
<td>April 5–Durham, NH</td>
<td>(603) 862-4234</td>
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<tr>
<td>Global Climate Change in Maine–The Risks &amp; Opportunities</td>
<td>Coalition for Sensible Energy</td>
<td>April 7-8–Lewiston, ME</td>
<td>(207) 469-6770</td>
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<td>Reunion ‘99</td>
<td>NPPR</td>
<td>April 6-9– Washington, DC</td>
<td>(202) 466-7272</td>
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<tr>
<td>Auditing Business for Community Health, Safety &amp; Environment–Part 1: Metal Finishers &amp; Auto Shops</td>
<td>EPA Region I</td>
<td>April 14–Hadley, MA</td>
<td>(617) 918-1714</td>
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<tr>
<td>Environmental Regulations &amp; P2 for NH Municipal Highway Garages Workshops</td>
<td>EPA Region I &amp; NH DES</td>
<td>April 20–Concord; April 22–Littleton; April 27–Exeter; April 29–Keene</td>
<td>(617) 918-1844</td>
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<td>Climate Change and Civil Society</td>
<td>Tufts University</td>
<td>April 24–Medford, MA</td>
<td>(617) 627-3665</td>
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<td>Industrial Ecology IV–The Profit in Sustainability: Tools for Living Companies and a Living Economy</td>
<td>Future 500</td>
<td>April 30-May 2–Watsonville, CA</td>
<td>(916) 486-5999</td>
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<td>The 11th Annual EnviroExpo</td>
<td>Longwood Env. Management</td>
<td>May 4-6–Boston, MA</td>
<td>(617) 489-3400</td>
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<tr>
<td>Environmental Regulations &amp; P2 for VT Municipal Highway Garages Workshops</td>
<td>EPA Region I &amp; VT DEC</td>
<td>May 6–St. Albans; May 11–Clarendon; May 18–Windsor; May 20–Dummerston; May 25–Colchester; May 27–Dorset; June 2–Derby; June 3–Lyndon; June 9–Berlin</td>
<td>(617) 918-1845</td>
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<td>1999 Great Lakes Student Summit</td>
<td>ECOPP</td>
<td>May 12-14–Buffalo, NY</td>
<td>(716) 858-8846</td>
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<td>Toxic Chemical Reporting Form R</td>
<td>NBC</td>
<td>May 13–Rhode Island</td>
<td>(401) 222-6680 x352</td>
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<td>4th Annual Statewide HHW Conf.</td>
<td>San Francisco</td>
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