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The Newsletter of the Great Lakes Regional Pollution Prevention Roundtable (GLRPPR)

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GLRPPR Summer 2003 Conference Recap

The Summer 2003 Great Lakes Regional Pollution Prevention Roundtable (GLRPPR) conference was held August 6-8 in Erie, Pennsylvania. The event was hosted at the Clarion Conference Center Hotel near the Presque Isle State Park in Erie.

A two-part energy training program was hosted prior to the primary conference. The first part of the training consisted of a presentation by Rob Campbell from Vestar on the basics of energy audits. Part two consisted of a presentation from Hank Van Ormer from Air Power USA. Mr. Van Ormer's session focused on energy efficiency opportunities in compressed air systems. Approximately 30 people attended the training, including several individuals from companies in the Erie, PA area.

The GLRPPR Steering Committee met immediately following the energy training program. The Committee meets face to face twice a year, in conjunction with the Roundtable member events.

The conference drew approximately 65 people from the Great Lakes region. The majority of participants were from private businesses, state and local government agencies within the immediate area. The balance of attendees represented federal and local government agencies.

The format for this conference was modified so that all of the presentations were hosted in a single session. This gave participants an opportunity to hear all of the presentations, and the ability to benefit from the synergy of the topics and presentations.

Mayor Richard Filippi welcomed guests to Erie and the Roundtable meeting. Other distinguished speakers included Dan Desmond, the Deputy Secretary of the Pennsylvania Department of Environmental Protection (DEP) Office of Pollution Prevention, and Lori Boughton of the DEP Office of Great Lakes. Ms. Boughton gave a feature presentation about the redesignation of the Presque Isle Bay from an Area of Concern to Area of Recovery, which demonstrated a shift in focus from remediation efforts to pollution prevention (P2) in the watershed.

Other presentations featured industrial energy efficiency as part of a P2 strategy and water pollution coupled with P2 strategies. Case studies were presented on facility-wide P2 programs at major manufacturing plants within the area (LORD Corporation, Merck & Company, and PPG Industries).

Additional highlights of the program were presentations about energy efficient green building design and innovative stormwater strategies. Mr. Paul Ziegler from Pennsylvania Governor's Green Government Council presented an innovative and exciting approach to building design that addresses pollution prevention and efficiency from the design phase through final occupancy and beyond.

Tom Cahill from Cahill and Associates offered information on the dynamics of stormwater management, including the management of volume as well as pollution. He also provided information about alternative asphalt and concrete paving systems that help alleviate the issue of stormwater as it relates to runoff volume. The system he discussed prevents the need for retention basins and water diversion by creating systems that permit the stormwater to percolate into the ground.

The next GLRPPR conference is in the process of being planned by the Steering Committee. GLRPPR anticipates that the next event will be hosted some time in Fall 2004. Check www.glrppr.org or watch your e-mail for announcements.

GLRPPR / NPPR Board Liaison Change

Marcia Horan, Chief of the Pollution Prevention and Compliance Assistance Section at the Michigan Department of Environmental Quality (DEQ), will be replace Cindy McComas of the Minnesota Technical Assistance Program (MnTAP) as the Great Lakes Region National Pollution Prevention Roundtable (NPPR)

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Board Liaison. Cindy has served on the NPPR Board of Directors in the Great Lakes Region position since March 2000. She has been a significant contributor to GLRPPR as well as representing the interests of U.S. EPA Region 5 within NPPR. Cindy will continue to be an active member of GLRPPR and will remain on the NPPR board as the “At Large” board member.

Please join the GLRPPR staff in extending a warm welcome to Marcia as she joins the GLRPPR steering committee and in thanking Cindy for her hard work and contribution to the region.

News From MnTAP

The following are highlights of recent activities of the Minnesota Technical Assistance Program (MnTAP):

Phosphorus Reduction in the Upper Mississippi River

MnTAP has received a grant from The McKnight Foundation to reduce loading from industrial point sources of phosphorus in the Upper Mississippi River basin using pollution prevention strategies. The project involves working with publicly owned treatment works (POTWs) to inventory industrial phosphorus sources, identify pollution prevention opportunities for industrial users, assist industries with implementation of pollution prevention techniques, and document the results. Technical staff will work with industrial point sources of phosphorus including: food processing operations (such as dairy, meat processing, vegetable processing, and rendering operations), phosphatizing (metal preparation) operations in metal finishing shops, and cleaning operations, from sanitizing to janitorial cleaning in manufacturing or service businesses.

MnTAP conducted similar work in the lower Mississippi River basin in 2000-2002. MnTAP has a number of phosphorus reduction resources available online at <http://mntap.umn.edu/potw/phosphorus.htm>.

H2E Update

Working under an EPA Region 5 grant, Catherine Zimmer of MnTAP, has helped thirteen Minnesota health care facilities sign on as Hospitals for a Healthy Environment (H2E) Partners. Eighteen Minnesota health care facilities are working on mercury elimination. Three Minnesota healthcare facilities (Hennepin County Medical Center, First Care Health Services and Ridgeview Medical Center) received H2E’s “Making Medicine Mercury Free” award in June 2003.

MnTAP has developed two new resources to support its H2E work: *Mercury in Health Care Laboratory Reagents* <http://mntap.umn.edu/health/92-Mercury.htm> and *Meeting JCAHO Standards with Pollution Prevention* <http://mntap.umn.edu/health/jcaho.pdf>.

Materials Exchange in the News

The mainstream media reaches far more people than any form of paid promotion. One week following an article about materials exchange programs in a recent edition of *Parade Magazine*, a national Sunday newspaper insert, Minnesota’s interactive Web-based materials exchange had 222 new registrants sign up, with 137 specifically citing *Parade* as how they heard about the program. This was a 640 percent increase in the number of registrants for one week. To learn more about this program, visit <http://mnexchange.org/>.

Pferdehirt to Direct Distance Degree Programs

Congratulations to Wayne Pferdehirt, who was recently appointed director of engineering distance degree programs for the College of Engineering at the University of Wisconsin—Madison (UW-Madison). In this new position, Wayne will represent the College in working with departments to develop, deliver and improve web-based graduate degree programs. He will continue as director of the Master of Engineering in Professional Practice (MEPP) program and assistant department chair of Engineering Professional Development at UW-Madison. Wayne is also a co-director of the Printer’s National Environmental Assistance Center (PNEAC) and faculty member of the University of Wisconsin-Extension Solid & Hazardous Waste Extension Center (SHWEC).

Two Michigan Programs Receive National Pollution Prevention Awards

In September 2003, two of Michigan's most innovative and effective pollution prevention organizations received Most Valuable Pollution Prevention Program (MVP2) awards from the National Pollution Prevention Roundtable (NPPR). MVP2 awards are presented annually to recognize outstanding and unique pollution prevention projects, programs, publications and volunteers. Award-winners are judged for their innovation, measurable results, transferability, commitment, and optimization of available project resources.

The Michigan Department of Environmental Quality (DEQ) received an MVP2 award for its Retired Engineer Technical Assistance Program (RETAP). "We are honored that RETAP has received this prestigious award from the NPPR," DEQ Director Steve Chester said. "It is very gratifying for RETAP to be recognized as one of the most robust state pollution prevention programs in the country."

RETAP is being honored for its effectiveness in encouraging the adoption of pollution prevention technologies by small- and medium-size businesses. RETAP staff members conduct approximately 150 pollution prevention assessments a year. The assessments are voluntary and confidential, and focus on resource conservation, preventative maintenance, process changes and energy efficiency. RETAP encourages facilities to implement all recommendations. It also provides technical demonstration grant funds to assist with the implementation of technology and innovative practices. A major goal of the program is to facilitate the diffusion of pollution prevention technology within industry. In addition, RETAP sponsors a student internship program. Through its university partners, the DEQ has placed 24 students in industrial facilities over the last three years to develop and implement pollution prevention projects.

The West Michigan Sustainable Business Forum (WMSBF), a partnership of the West Michigan Environmental Action Council (WMEAC) and local businesses, also received an MVP2 award for its achievements in sustainable business practice. WMSBF is the country's largest membership organization committed to pollution prevention. "We are extremely honored to be singled out by this national organization for our sustainability efforts in West Michigan," said WMSBF President Bob Van Stright. "The credit goes to our membership and their ongoing commitment to business practices that are economically, socially, and environmentally sustainable."

WMSBF is being recognized by NPPR for "facilitating noteworthy achievements in sustainable business practice" and for its "unusual and innovative partnerships, with broad goals." The 70-member Forum represents a cross-section of industries from throughout West Michigan including engineering, energy, contract furniture, and industrial design. WMSBF and its members are committed to continuously improving environmental performance. The Forum believes that environmental leadership can, and should, come from within the business community. Members investigate and develop policies, programs and management systems that promote environmentally, socially, and economically sustainable commerce. Further information is available by contacting Bob Van Stright, WMSBF President (616-235-1500; bvanstright@valleycityes.com), or either Tom Leonard (tleonard@wmeac.org) or Lisa Locke, (llocke@wmeac.org) of WMEAC at 616-451-3051.

GLRPPR congratulates RETAP and WMSBF for this outstanding achievement. Congratulations are also in order for two other organizations in the Great Lakes Region that received 2003 MVP2 awards: the Ontario Centre for Environmental Technology Advancement (OCETA) Toronto Region Sustainability Program and the Ortho-McNeil Pharmaceutical facility in Spring House, Pennsylvania. For a complete list of this year's MVP2 winners and descriptions of their efforts, see <http://www.p2.org/p2week/2003Winners.cfm>.

Reminder: Michigan WREE Conference & Expo November 5

The 11th Annual Waste Reduction and Energy Efficiency (WREE) Conference & Expo will be held at the Burton Manor in Livonia, MI on November 5, 2003. This conference is designed for those who work in the environmental, health, and safety fields; building design; building maintenance; or anyone interested in reducing waste, preventing pollution, or operating their businesses more efficiently.

This year's conference offers tracks on seven different topic areas for a total of 25 different presentations. Tracks include Green Facility Design, Sustainability, Land Use, Water Conservation, Design for the Environment, Energy Efficiency, and Recycling. The conference will also feature an expo area for vendors of pollution prevention and waste reduction products and services.

Keynote speaker Danielle Conroyd, Project Director for the Sisters of the Immaculate Heart of Mary (IHM), will speak about the sustainable renovation of the IHM motherhouse in Monroe, MI. This project was awarded an EPA Clean Air Excellence Award for achievement in energy efficiency and green building in March 2003. Many businesses and other organizations discover costs savings, increased worker productivity, and environmental benefits when they apply green building, energy efficiency, and sustainability design principles to the construction of a new structure or the renovation of an existing structure. Ms. Conroyd will explain how the Sisters of IHM used these principles in renovating their motherhouse, and the benefits they are experiencing.

Thanks to the generosity of co-sponsors, registration, which includes continental breakfast, lunch, reception hors d'oeuvres, workshop materials, and entrance to the expo area is offered at the low price of \$50. Register online at www.michigan.gov/deq (click on "DEQ Training and Workshops" under Quick Links on the right, then click on "Workshops"). For registration information, contact the Environmental Assistance Center at 1-800-662-9278, or e-mail at deq-ead-env-assist@michigan.gov.

Graphic Communications Conference Location Announced

The National Environmental, Health & Safety (NEHS) Conference for the Graphic Communications Industries will be held March 14-16, 2004 at the newly renovated Hyatt Regency Hotel in Indianapolis, IN. The NEHS Conference partners are the Foundation of Flexographic Technical Association, the National Association of Printing Ink Manufacturers, the Graphic Arts Technical Foundation/Printing Industries of America, the Screenprinting & Graphing Imaging Association International and the Gravure Association of America.

Complete with tabletop exhibition and training opportunities, this conference will provide the information beginner and expert-level EHS professionals need to succeed. Whether pursuing knowledge of environmental issues or topics on health & safety, attendees will benefit as sessions address up-to-the-moment industry information, case studies and hands-on opportunities. Additionally, presenters will be focusing on how to implement the skills learned during the sessions. For more information about NEHS 2004, visit the official conference website at www.nehsconference.org.

WDNR Places Bounty on Mercury in Schools

The Wisconsin Department of Natural Resources (WDNR) Bureau of Cooperative Environmental Assistance started a Community Mercury Reduction Program in 1996. During the seven years of this program, many pounds of mercury have been collected from schools all over the state. Three of the largest collections coupled cash bounties for mercury-containing school laboratory equipment with free recycling. The Milwaukee Metropolitan Sewerage District (MiMSD), Superior Wastewater Treatment Plant, and the Lower Fox River Valley Communities all promoted their school mercury bounty programs with letters to science teachers and superintendents, and with program flyers and brochures. The schools that participated in these

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programs received a certificate declaring their school “virtually mercury-free”. Some communities held special ceremonies for the participating schools.

MiMSD offered a bounty of \$5 per laboratory thermometer, \$20 per sphygmomanometer and \$50 per barometer. There were two phases of MiMSD’s school bounty collection due to its great initial success. Thirty-two schools from the Milwaukee area participated in the first round and 24 schools participated in the second round. A total of 288 pounds of mercury were collected and recycled. This resulted in a total cost of \$17,315 for bounty checks to the schools and \$6,720 to cover the cost of the mercury recycling.

Superior offered the same bounty award as Milwaukee. This program was offered to the school districts in the ten Northwest counties of Wisconsin. Superior helped audit the schools for mercury and mercury-containing products. They also provided a mercury-training curriculum to the teachers and a mercury presentation to the students. A total of 32 schools participated in the project, which yielded over 150 pounds of mercury. \$1,645 was distributed to schools for bounty awards and the recycling cost was \$1,050.

The Lower Fox River Communities (Cities of Appleton and De Pere Wastewater Treatment Plants and the Green Bay, Neenah/Menasha, Grand Chute Menasha West, and Heart of the Valley Metropolitan Sewerage Districts) offered \$3 per laboratory thermometer, \$20 per sphygmomanometer, and \$50 per barometer as bounty rewards. A significant amount of mercury and mercury-containing products had been collected prior to the onset of this project. Nonetheless, 11 schools participated in the bounty collection. A total of 70 pounds of mercury were collected through this program and \$1286 was awarded to the participating schools. The cost for recycling the mercury at the Brown County Hazardous Waste Facility was \$589.

The total cost of these bounty programs was \$28,605, not including staff time, with collection and recycling of over 500 pounds of mercury for an average cost of \$4.47/pound. Note that bounty awards were not offered for bulk liquid mercury that represented about 81.5 % of the surrendered mercury from the schools.

Septic System P2 Best Management Practices: Decision-making Tools for Local Government

The Erie County (New York) Department of Environment and Planning Office of Pollution Prevention, and Buffalo State College- in cooperation with the Erie County Water Quality Committee- partnered on a septic system pollution prevention project which consisted of two primary components:

- Delivery and assessment of a county level outreach program on proper use and maintenance of a septic system; and,
- Application of computer-oriented tools, such as Geographic Information Systems (GIS) and water quality modeling, to identify problem source areas and evaluate the potential impact of septic system remediation on receiving water quality.

The project partners conducted two community workshops on proper septic system use and maintenance. The program consisted of three main components: general information on septic systems, symptoms of septic system failure and operation and maintenance guidance. For more information on the workshops, contact Erie County at 716-858-6370.

Geographic Information Systems (GIS) technology was used to identify buildings and their characteristics, such as floor space and number of bedrooms, within a 300 foot buffer around tributary streams in the Buffalo River watershed. It was also used to identify households within 300 feet of a waterway for a direct mailing promoting the workshops. The BASINS version 3 computer model was used to estimate bacteria loadings to the watershed from septic systems operating at various efficiency rates and to determine the potential impact

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of different septic system abatement options on water quality. For more information on the GIS and water quality modeling component of the project, contact the Department of Geography and Planning at Buffalo State College 716-878-6204.

For more information on this and other projects of the Erie County Department of Environment and Planning, visit <http://www.erie.gov/environment/>.

Water Quality Pollution Assessment and Prevention Theme Team

The U.S. Cooperative State Research, Education and Extension Service (CSREES) National Water Quality Facilitation Project supports a network of pollution prevention educators called the Water Quality Pollution Assessment And Prevention (WQPAAP) Theme Team. The WQPAAP Theme Team is a network of Extension and other educators - including individuals from the Great Lakes region - who promote self-assessments, voluntary actions and monitoring by private land-use managers and residents to protect and restore water quality.

The WQPAAP Theme Team is about to release an updated directory of its members, including short descriptions of their extension, research, teaching and other pollution prevention activities. The current directory is available online at <http://www1.uwex.edu/ces/farmasyst/directory/p24adir.cfm>. Other WQPAAP Theme Team services include a quarterly newsletter, listserv, and a web site that includes links to national and regional water quality facilitation projects.

WQPAAP is also helping to organize the USDA-CSREES National Water Quality Conference, scheduled for January 11-14, 2004 in Clearwater, FL. This conference will include sessions on water quality at underserved farms, quantifying phosphorous losses in agricultural fields, citizen monitoring efforts, watershed management, best practices for water outreach education and other topics. For more information, see the conference web site at <http://conference.ifas.ufl.edu/wq/>.

For more information on the WQPAAP Theme Team, visit <http://www.uwex.edu/farmandhome/wqpaap/> or call 608-262-0024.

GLNPO Significant Activities Report Available Online

The latest issue of the U.S. EPA Great Lakes National Program Office (GLNPO) Significant Activities Report is available online. Highlights of this issue (August 2003) include:

- The View from Space
- Summer Lakes Survey
- Special Lake Erie Cruise
- What's Next: Emerging Pollutants
- Mining Ideas 2
- Tall Ships Chicago 2003
- Acting Geographically
- Making Lake Michigan Great 2003
- Preserving History
- Staying Ahead of Carp
- Aquatic Nuisance Species Panel
- Mudpuppy on the Move
- New River Raisin Sediment Report
- How We Monitor
- Atrazine Report Online

To view the report in HTML, go to <http://www.epa.gov/glnpo/active/index.html>. An Adobe Acrobat version of the report is also available at <http://www.epa.gov/glnpo/active/2003/aug03.pdf>.

P2 Efforts Decrease Styrene Emissions by Almost Half

Indiana is home to a large number of fiber reinforced plastic manufacturers, which produce many products including recreational vehicles (RVs), campers, boats and truck caps. The fiber reinforced plastics used extensively in this industry are made with styrene-containing resins that are mixed with fiberglass. Five north-central and northeastern Indiana counties have large concentrations of industries that manufacture fiber reinforced products. Facilities in these five counties account for more than 80% of the styrene releases in Indiana. More than 40% of Indiana's styrene releases are reported in Elkhart County, one of the largest recreational vehicle manufacturing centers in the country.

Styrene is a toxic chemical that evaporates quickly when exposed to air and is linked to a variety of human health and environmental problems. It is a hazardous air pollutant that EPA classifies as a possible human carcinogen. It also contributes to the formation of ground-level ozone in the summer.

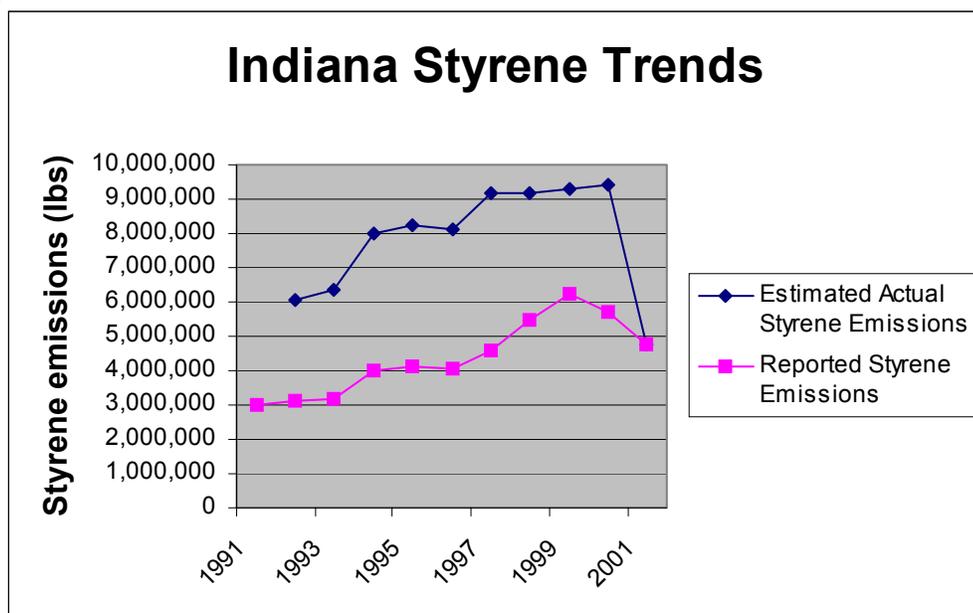
Styrene is released into the air when resins and gelcoats used to make fiber reinforced plastics are sprayed into open molds and then cure. Experienced sprayers, proper equipment, and low styrene materials all can play a role in reducing the amount of styrene released into the air.

In 1997, the Indiana Department of Environmental Management (IDEM) began a styrene-reduction initiative focusing on pollution prevention (P2) techniques, including flowcoat application, low-styrene resins and gelcoats, and vapor suppressed resins. Flowcoating is a process in which fiber reinforced resins are delivered into the molds as a stream rather than as an atomized spray. Other P2 options, such as resin rollers and closed molding, are available but are more expensive and have limited use.

By 2001, IDEM finalized a styrene rule with industry assistance, which enabled the industry to use P2 to reduce styrene emissions. The Clean Manufacturing Technology Institute (CMTI) provided training and research to assist the industry with implementation of the new technologies. The Institute trained over 400 employees from 44 Indiana fiber reinforced plastic manufacturing facilities. As a result of these efforts Indiana's styrene releases dropped from about 8 million pounds in 1996 to less than 5 million pounds in 2001.

The National Emission Standards for Hazardous Air Pollutants for this sector were recently finalized. IDEM has been providing assistance to the industry on the new rule, and is currently accepting comments on combining the state rule with the new federal rule. CMTI's Coating Applications Research Laboratory has since been involved in developing emission factors for the industry and continues testing new clean manufacturing technologies to reduce styrene emissions.

This successful outreach has become an ongoing example of how regulators and industry can work together to use pollution prevention to achieve measurable results in a cost effective manner. For more information on Indiana's Styrene Initiative, contact Karen Teliha at 800-988-7901.



Green Building Activity in Cleveland

Project Update: High Performance Town Homes for the Cleveland EcoVillage

The Cleveland EcoVillage is an innovative partnership involving nonprofit organizations, the city, the regional transit authority, private developers, and neighborhood residents. It is a national demonstration project that will showcase green building and transit-oriented development.

The first major development of the Cleveland EcoVillage project will include 20 town homes. The first ten units of this development are complete. The town homes average 1,600 square feet and incorporate the latest green building features, including super energy efficiency, controlled ventilation, non toxic building materials and proximity to transit. Key features of the EcoVillage Cleveland town homes include:

- High-density urban infill with rapid transit access
- Detailed plans and “green” specifications
- Controlled ventilation
- High performance envelope, windows and HVAC
- Advanced framing; FSC certified lumber and finished wood products
- Quality extra living space on lower level
- Ducts in conditioned space
- Detached garages
- Pervious concrete and salvaged brick pavers
- Extensive construction waste recycling — on and off site

EcoCity Cleveland, a nonprofit organization that promotes ecological design, smart growth, and transportation choices, has documented the building process and continues to offer workshops to promote green building to the design and construction industries of Northeast Ohio. For more information on this project, visit http://www.ecocitycleveland.org/ecologicaldesign/ecovillage/intro_ecovillage.htm.

Project Update: Adam Joseph Lewis Cleveland Environmental Center

A nonprofit development organization called Ohio City Near West Development Corporation, a for-profit real estate company called Cleveland Urban Properties, and a consortium of nonprofit environmental organizations are teaming-up to create the Cleveland Environmental Center (CEC). The CEC is a 1918 bank building in Cleveland. The project aims to be the first commercial green building retrofit in Ohio, merging a historic retrofit with cutting-edge, affordable, green building principles.

The 25,000-square-foot building was given extra insulation, T-5 fluorescent lights, occupancy sensors (motion sensors) to shut off lights in unoccupied rooms, carbon dioxide monitors to shut off ventilation in unoccupied rooms, low-emissivity windows, and glass interior partitions to allow greater spread of daylight. The roof includes solar panels, reflective material and a garden with native plant species. The ground level has a radiant floor heating system to avoid wasting energy in an effort to heat a 26-foot-high lobby. Enough energy-efficiency measures have been retrofitted into it that the Cleveland Green Building Coalition (GBC), a Rebuild America partnership, estimates the project is on target to achieve a level of energy efficiency 67 percent greater than what would have resulted from a conventional renovation.

The renovation is nearly complete and the CEC is already occupied. The anchor tenant organization will be a consortium of nonprofit groups, including: Environmental Health Watch, EcoCity Cleveland, the Cleveland Green Building Coalition, Clean Air Conservancy, Green Energy Ohio, and the League of Conservation Voters Education Fund. The redevelopment will utilize historic tax-credits while integrating modern green building technologies. The project will be one of the first in the region to meet the U.S. Green Building Council's Leadership in Energy and Environmental Design Silver rating on a historic renovation.

The renovation project has a price tag of about \$4 million, with a payback of about four years thanks largely to energy savings. Financial and technical assistance have come from Rebuild America, the U.S. Interior Department, the Ohio Department of Development, the City of Cleveland and contributor Adam Joseph Lewis. For more information, visit <http://www.clevelandgbc.org/cec/>.

International Truck and Engine Uses Six Sigma to Achieve Lead Reductions

Six Sigma is a process approach to waste elimination and process capability improvement that has become popular in many corporations over the last ten years. The process is designed to be data driven to achieve breakthrough results. It assesses relevant process capabilities, uses statistical tools to select and implement an appropriate design, and proves the real-world performance of the design strategy selected.

International Truck and Engine Corporation's Springfield Assembly Plant is the nation's leading manufacturing of medium duty trucks and school bus chassis. The facility is one of the charter members of US EPA's Waste Minimization Partnership, part of the Resource Conservation Challenge.

International Truck and Engine Corporation used the Six Sigma process to achieve lead reductions. Previously, copper truck battery cable ends were dipped in molten lead as a final step in production. The lead provided good electrical conductivity and corrosion resistance. The operation was being moved from one manufacturing facility to another and this prompted International's Environmental Health and Safety department to consider whether or not alternatives to using lead were available.

An International engineer who attended a Six Sigma training class selected this "problem" to solve using the tools he learned in the class. The goal was to exchange the leaded solder with lead-free solder without a reduction in corrosive resistance, mechanical, and conductivity properties of the battery cable ends. Both of the alternative materials studied were more expensive than the existing material and were expected to increase the cost of production materials by \$35,000 annually. However, these increases would be offset by decreases in cleaning, waste disposal, testing, and potential liabilities associated with employee exposures, regulatory compliance and long-term disposal risks. Other potential benefits included elimination of Toxics Release Inventory (TRI) reporting for lead, elimination of a hazardous air pollutant and elimination of lead in wastewater discharges.

Failure mode effects analyses (FMEA) were conducted on all three materials. The design FMEA determined that differences in the properties of materials chosen were insignificant relative to the application and the dip time was unaffected.

Quality and feasibility testing was important in selection and in convincing management that switching to a more expensive, environmentally friendly material would not result in warranty and performance issues. Third-party laboratory testing was used for mechanical, electrical and corrosion tests. Tests were conducted at different amperage and atmospheric conditions. Extrapolated data showed lead to have the poorest electrical and corrosive properties in the tests. There were no detectable differences among the materials for mechanical properties. It was recommended that either of the alternative materials be used as a substitute for the lead solder. It was decided to use up the existing stock of lead solder as a cost savings and to prevent waste.

International continues to seek reductions in hazardous waste and other environmental releases and occupational exposures. International will continue to participate in voluntary partnerships, especially where there are opportunities for improvement that are likely to be less costly than regulation.

Illinois Salutes 22 Businesses and Organizations for P2 Achievements

Governor Rod R. Blagojevich recently named 22 Illinois companies and organizations winners of the Governor's Pollution Prevention Awards for significant achievements in helping the environment and the economy. The 17th annual Governor's Pollution Prevention Awards were presented in Springfield during a luncheon hosted by the Waste Management and Research Center (WMRC), a division of the Illinois Department of Natural Resources.

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The recipients reported Pollution Prevention (P2) projects with combined annual savings of \$13.4 million in material and disposal costs. The companies prevented nearly 127,500 tons of waste materials from being released into the environment and saved more than 40 million gallons of water from being sent to treatment facilities.

Applicants were judged in statewide competition on criteria including technological innovation, environmental significance, economic benefits and commitment to pollution prevention. WMRC pollution prevention engineers reviewed the applications, while the Illinois Environmental Protection Agency determined company environmental compliance.

The Innovate Illinois Award also was presented to International Truck and Engine Corporation during the Springfield event. International won the award for its Green Diesel Technology, an innovative integration of clean air technology and diesel performance made possible through years of product design and engineering. The new technology utilizes the benefits of a catalyzed diesel particulate filter and low-sulfur fuel in combination with an exclusive engine performance design that significantly lowers the emissions and odor of diesel-powered buses and trucks. The Innovate Illinois Award includes a scholarship provided by external sources, which is provided to a student at an Illinois college or university.

Information on the Governor's Pollution Prevention Awards program and technical assistance on pollution prevention are available from the Waste Management and Research Center, One East Hazelwood Drive, Champaign, IL 61820, phone 217/333-8940, www.wmrc.uiuc.edu. The following are the 2003 Illinois Governor's Pollution Prevention Awards recipients. For descriptions of the recipients' P2 efforts, see the program booklet and press release available at http://www.wmrc.uiuc.edu/main_sections/info_services/govs_awards_prev_winners.cfm.

Large Industry Category

- Maytag Herrin Laundry Products (Herrin, IL)
- General Electric Industrial Systems (Bloomington, IL)
- Mitsubishi Electric Automation, Inc. (Vernon Hills, IL)
- Nestle' Brands Company, Beverage Division (Jacksonville, IL)
- Dynamic Manufacturing, Inc. (Melrose Park, IL)
- ITT Bell and Gossett (Morton Grove, IL)
- Ondeo Nalco Company (Bedford Park, IL)

Small Industry Category

- ASC Incorporated (Normal, IL)
- Five Corners Cleaners (Glen Ellyn, IL)

Educational Institution Award

- Spring Wood Middle School (Hanover Park, IL)

Vendor/Supplier Category

- Crazy Horse Concrete, Inc. (New Berlin, IL)

Continuous Improvement - Large Company

- Abbott Laboratories (North Chicago, IL)
- Eaton Corporation (Lincoln, IL)
- Caterpillar, Inc., Technical Services Division (TSD) (Mossville, IL)
- Sherwin Williams – Minwax (Flora, IL)
- ITT McDonnell and Miller (Chicago, IL)
- International Truck and Engine Corporation (Melrose Park, IL)

Continuous Improvement - Medium Size Company

- Amersham Health (Arlington Heights, IL)
- Gleason Cutting Tools Corporation (Loves Park, IL)

Continuous Improvement - Small Company

- Noveon Inc. (Henry, IL)

Innovate Illinois Award

- International Truck and Engine Corporation (Melrose Park, IL)

Service Organization Award

- Byron Forest Preserve District (Byron, IL)

Continuous Improvement – Service Organization

- Argonne National Laboratory (Argonne, IL)

National Metal Finishing Strategic Goals Program Update

The National Metal Finishing Strategic Goals Program (SGP) is a voluntary program that encourages companies to go beyond compliance by adopting baseline environmental standards that reduce pollution and conserve resources. The SGP partnership is based on seven ambitious environmental goals, ranging from reduced water and energy use to reduced human exposure to toxic metals. SGP is the result of a unique cooperative effort between representatives of EPA, the metal finishing industry, state and local governments, environmental organizations, and others.

Stakeholders at the 2002 SGP Summit assessed what worked best from SGP's successful initial program phase (1998-2002). The SGP members considered the changing priorities for industry and EPA, including the emergence of National Center for Manufacturing Sciences (NCMS) benchmarking numbers, and an emphasis on Environmental Management Systems by major metal finishing customers and the current federal administration. Accordingly, the focus of the program was refined to include the following elements.

Decentralization of Regional and State SGPs to Maximize Flexibility

The newly focused program retains the SGP, and continues to fit well in EPA's newly expanded Sector Strategies Program (see <http://www.epa.gov/sectors/program.html> for more information). While some things have changed, the SGP is alive and well, with active regional and state groups. Local programs have adapted to the changes, devoting whatever combination of time and resources they choose to accomplish their goals. Member organizations are encouraged to streamline their programs based upon their own experiences with what does and does not work. The ultimate goal is environmental improvement for metal finishers. If SGP members have questions, they are encouraged to contact their local representatives or contact Michael Hessling, U.S. EPA at hessling.michael@epa.gov or 202-566-2960.

Regulatory Reform Issues

U.S. EPA has shifted the majority of internal SGP resources from stakeholder group coordination to regulatory reform work, to accomplish the common sense regulatory reform issues identified through the initial phase of the SGP. Progress is being made on all fronts:

- SGP is working with U.S. EPA's Office of Solid Waste to develop a rule to eliminate regulatory barriers to F006 recycling. A proposed rule is anticipated by the end of 2003.
- SGP and the U.S. EPA Office of Water have made progress on finalizing the proposed pretreatment streamlining rule. A final rule is planned for 2004.
- SGP anticipates that the ChromeMACT rule will be final by the end of 2003.
- SGP is keeping track of regulatory trends, including the U.S. EPA Human Health Assessment for nickel and Clean Air Act changes.
- The National Performance Track Program may have a new option for greening the supply chain, which can incorporate the Corporate Sponsors Program established in New England.

Environmental Management System (EMS) Training

SGP is promoting EMS through its cooperative agreement with the metal finishing trade associations, the American Electroplaters and Surface Finishers Society (AESFS) and the National Association of Metal Finishers (NAMF), and with the Global Environment & Technology Foundation (GETF). These EMS training workshops are the centerpiece of SGP's outreach with individual metal finishers. This intensive training helps metal finishers create and implement an EMS for their facility over a period of months. The metal finishing EMS template provides all of the elements for a proven, effective EMS at a basic level, but also includes options to include all of the elements required for ISO 14001 certification or for entry into US EPA's Performance Track voluntary program. A training session was recently completed in Michigan, another is underway for New Jersey and New York, and one will begin soon in Minnesota. If you are interested in EMS training in your area, please contact Noeleen Tillman of GETF at 760/944.9398 or ntillman@getf.org.

Continued Measurement of Sector Performance

The National Metal Finishing Resource Center (NMFRC) continues to collect data, maintain and update its

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benchmarking database, and provide regular report cards to individual companies on their progress, environmental costs, and cost savings. Industry-wide environmental and economic progress is measured using the SGP worksheets, the results of the EMS training, and a search through the major EPA databases (TRI, RCRAInfo, PCS, etc.). In order to supply metal finishers with quality benchmarking data about their sector, it is essential that individual companies fill out their datasheets and return them to NMFRC. Contact George Cushnie of the NMFRC Technical Offices at 703-255-2240 or george@caiweb.com with questions regarding data collection.

For more information on the National Metal Finishing Strategic Goals Program, see the project web site at <http://www.strategicgoals.org>, the U.S. EPA metal finishing sector web site at <http://www.epa.gov/sectors/metalfinishing/>, or contact Michael Hessling, U.S. EPA at hessling.michael@epa.gov or 202-566-2960.

Fine Print

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