

GOVERNOR BLAGOJEVICH LAUDS BUSINESSES AND ORGANIZATIONS FOR ACHIEVEMENTS IN POLLUTION PREVENTION

SPRINGFIELD – Illinois companies and organizations that have made significant achievements in reducing the amount of air, solid, and water waste released into the environment have been presented Governor's Pollution Prevention Awards by Governor Rod R. Blagojevich.

"These 22 businesses are leaders in their industries because of their ongoing commitment to the environment, their communities and their employees," Blagojevich said. "Many of them have sustained pollution prevention programs over a number of years, striving to find new ways to reduce waste and show how pollution prevention is good for business."

The 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. This is the 17th year that WMRC has presented the Governor's Pollution Prevention Awards.

"The exceptional accomplishments by these companies in reducing, reusing and recycling waste and improving air and water quality are enhancing our environment and conserving valuable natural resources," said IDNR Director Joel Brunsvold.

The companies receiving awards reported pollution prevention 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's pollution prevention engineers reviewed the applications, while the Illinois Environmental Protection Agency determined company environmental compliance.

"Again this year, we were impressed with the variety and quality of the projects undertaken by the winning companies," said George Vander Velde, Director of the Waste Management and Research Center. "These businesses and organizations have proven that pollution prevention makes good sense for the environmental and economic health of Illinois. They have achieved their pollution prevention goals and saved millions of dollars in pollution control, waste disposal, energy and raw material costs."

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

2003 Governor's Pollution Prevention Award Winners

Large Industry Category

Maytag Herrin Laundry Products

General Electric Industrial Systems, Bloomington is a manufacturer of electrical controls. The plant's pollution prevention activities included installation of Programmable Logic Controllers to reduce water usage on its Plating Line. It also upgraded to conductivity meters to control water flow on its Electro Polish rinse lines. Over the last year the project has saved 2 million gallons of water and \$14,000 in operating cost. Energy reduction projects included machine and lighting timers, condensing 2nd and 3rd shift operations, and reducing the size of the backup air compressor to reduce operating cost. All projects combined have led to a saving of 733,308 KWH and over \$36,000 in operating cost.

Nestlé Brands Company, Beverage Division

Nestlé Brands Company, Beverage Division, located in Jacksonville, Illinois (Nestlé) manufactures and packages powdered Coffee-mate®, a non-dairy coffee whitener. In 1996, the plant instituted the Nestlé Environmental Management System (NEMS). As part of that strategy, the Jacksonville facility looks for ways to reduce the use of hazardous materials by elimination or substitution. In 2002, the plant reduced the use of and inventory of hazardous materials, which reduced their hazardous waste generation by approximately 31%. They also replaced fluorescent lamps with low mercury bulbs, which reduced not only reduced special waste generation and the associated disposal costs by approximately 45% but also reduced energy costs. A change to their product formulation resulted in a better tasting product (preferred consumer taste), increased their production rate, and lowered air emissions by 30.92 tons/year, a cost savings of approximately \$76,000.00. The plant also began to sell non-conforming filled Coffee-mate® 3 gram packettes as animal feed and implemented a clean floor powder recovery program that was incorporated into the existing vacuum system waste and also sold as animal feed. These two programs generated approximately \$85,000.00 in cost recovery and landfill avoidance. The powder recovery program, combined with employee communications and training which addressed the facility dry-cleaning procedure, reduced BOD in process wastewater by approximately 18% (\$34,445.00) from 2001 to 2002. Finally, a system that allows employees to identify and tag equipment and process line air leaks resulted in energy conservation cost savings of approximately \$110,000. In addition, the air-leak tagging system allowed the plant to cut back to just one air compressor, which allowed their second compressor to become a stand-by unit. This resulted in resource conservation and eliminated the need for the purchase of a third \$500,000.00 air compressor, which their engineering department had recommended prior to implementation of the tagging program.

Dynamic Manufacturing, Inc. is a family owned company concentrating exclusively in the re-manufacture of all makes and models of transmissions and torque converters. The company has been working to utilize aqueous cleaners to replace naphtha-based solvent cleaner. Also, company officials are evaluating the use of ultrasonics in the cleaning process to extend the life of the caustic cleaner baths. During the remanufacturing process, the transmissions require testing where transmission fluid is circulated through the transmission while it is operated at speed. This fluid is collected, filtered, and reused in further testing. The amount of transmission fluid recycled in 2002 was 73,000 gallons leading to annual savings of \$193,000 for the cost of purchasing virgin transmission fluid.

ITT Bell & Gossett, Morton Grove is a leading manufacturer of pumps, valves & engineered systems for the HVAC market. Bell & Gossett personnel set up a coolant recycling unit, converted 75% of their machines over to a single long-life synthetic coolant, installed a coolant delivery system to deliver recycled pre-mixed coolant to 60 machines running the new synthetic coolant, converted the parts washer to a product that extended the cleaner life by 2-1/2 months, started a coolant maintenance program, and set up an automated metric collection system to monitor the system. The results are that the coolant is 100% recycled and not added to the waste-stream, the waste-stream has been reduced by 120,000 gallons per year, and annual savings are estimated at \$60,000 per year.

Mitsubishi Electric Automation, Inc., Vernon Hills is an ISO 9001 and ISO 14001 registered manufacturer/provider of control devices and integrated systems for factory automation applications. The company initiated several pollution projects designed to reduce waste generation at the facility including a 33% reduction in office lighting electrical consumption and a similar reduction in the number of fluorescent lamps required while still achieving a 25% lighting level increase. The company also developed an aerosol chemical elimination program that resulted in a 95% reduction in the amount of aerosol-based chemicals used on site. The use of non-aerosols replacements virtually eliminated the aerosol can hazardous waste stream and reduced chemical purchase costs by approximately 55%. Additionally, the company implemented a program to recycle or reuse foamed packing material received on site.

Ondeo Nalco Company, Bedford Park is a specialty chemical company that manufactures a variety of colloidal silica products used for casting of metal parts and ceramic forms, and other uses. In 2002, the plant installed a new manufacturing technology that is more efficient requiring less steam, water, and wastewater treatment. The production shift saved water and natural gas, as well as reduced wastewater to the local publicly owned treatment works. Overall the savings from gas, water, and treatment chemicals is approximately \$820,000 per year. It requires only one-fifth the amount of steam compared to the older manufacturing process, saving approximately 125 million cubic feet of gas and related emissions each year. The process also generates less wastewater and cleaner wastewater, saving approximately 28.2 million gallons of water per year and 32,000 gallons of treatment chemicals.

Small Industry Category

ASC Incorporated - Normal Plant is the provider of the Mitsubishi Spider Topstack. The plant manufactures the highest quality product and service to its customer while safeguarding environmental impacts. ASC Normal has implemented several recycling and energy conservation programs to achieve cost savings and land fill reductions. Projects including developing a core return program resulting 100% of thread, welt and binding cores are recycled providing a cost savings of \$0.25 per core. Redesign of cutting dies has reduced landfill impacts from 22 tons annually by 25%. End of day energy program reduces the cost of operation energy annually by 3%.

Five Corners Cleaners in Glen Ellyn is a third generation family owned business. The cleaner replaced its existing equipment with state of the art technology that utilizes an environmentally preferable, biodegradable cleaning material. The new technology and process has produced a reduction of hazardous waste to zero and air emissions by 93%. The Five Corners owners maintain that while it was a costly renovation, the lower environmental taxation and reduction of hazardous waste removal will pay for the capital expenditure over time. They also feel that improvements in the environment are an investment in the future.

Educational Institution

Spring Wood Middle School, Hanover Park developed a program to review the current inventory of chemicals in the science laboratories and remove any unneeded chemicals. Upon making a list of necessary materials used in the curriculum, the school compiled a list of 120 different chemicals determined unnecessary to keep. The IEPA Hazardous Waste Collection Station in Naperville was contacted and given the list of our chemicals to determine if they would be accepted. Upon approval, the chemicals, weighing over 150 pounds, were separated and boxed up for removal. In addition, the school created a chemical inventory binder containing an emergency response guidebook and the Material Safety Data Sheets (MSDS) for all chemicals currently used. Students will be provided with lab/chemical safety training as part of the current curriculum. In the future, chemicals will be purchased only in the quantity needed for the schools lesson plans to reduce the waste volume.

Service Organization

Byron Forest Preserve District in Byron has a mission to provide for preservation of natural resources, to provide education about our natural/cultural heritage, and provide recreation. The Forest Preserve developed a recycling station to meet the mission of preserving natural resources and to educate hundreds of students on recycling through the International Earthkeepers program. The recycling station is collected and sorted an average of two times per month and contains three tons of recyclable material like cardboard, glass, newspaper, various plastics, and metals. The cost of hauling is covered through a cooperative agreement with our county Solid Waste Management Department.

Continuous Improvement

Large Company

Abbott Laboratories, North Chicago is a broad-based health care company that discovers, develops, manufactures and markets products and services that span the continuum of care from prevention and diagnosis to treatment and cure. Abbott's pollution prevention project included: introducing a new package design that is 20.6% smaller and reduced over 580,000 pounds of packaging material based on 2002 sales; replacing hazardous chemicals in various pharmaceutical processes which resulted in cost savings of over \$1.1M, reduced methanol by 55,605 lbs. and reduced hazardous waste by 48,700 lbs.; eliminating 3,000 cubic yards of landscaping debris by purchasing a tub-grinding machine that recycled tree limbs and bushes for use as mulch. This mulch provided 95% of Abbott's landscaping needs and resulted in an annual savings of \$36,780.

Caterpillar, Inc., Technical Services Division Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines and industrial gas turbines. The Technical Services Division (TSD), headquartered at the Technical Center in Mossville, Illinois, provides support services to Caterpillar business units in all aspects of product development. TSD's pollution prevention activities included the redesign of the 793C Off-Highway truck to reduce spectator sound levels from 122 dBA to 112 dBA (decibels on the A-weighted level) without sacrificing machine performance or serviceability. The redesign reduced noise pollution. The TSD also began using "real time" oil soot analysis to measure the level of soot in engine oil. Soot, partially burned fuel that sticks to the cylinder wall, is scraped down into the oil sump where it causes wear on the engine and shortens oil life. Engine oil soot loading rates

have traditionally been established by running the engine at least 50 hours and periodically sampling the oil. The success of “real-time” oil soot analysis resulted in \$570,000 in annual cost savings. In addition to a four-fold increase in equivalent test data, there are also reductions in test time, fuel consumption, energy use and air emissions associated with testing. TSD also recommended the installation of adjustable speed drives, electronic sensors, and automated building controls to increase energy efficiency at Caterpillar’s Technical Center. Test cell ventilation fans, cooling tower fans, and process water pumps fitted with this technology **conserved 5,960,242 kWh and prevented the emission of 12,754,918 lbs. of CO₂; 29,801 lbs. of NO_x; and 156,456 lbs. of SO₂.**

International Truck and Engine Corporation in Melrose Park has been implementing pollution prevention projects and achieving significant waste reductions for many years. In 2002, International increased efforts to reduce the usage of natural resources and energy consumption. The facility has reduced the usage of solvent through the addition of self-distilling parts washers, environmentally friendly alternative cleaners, and an efficient tracking program to limit solvent issues. In addition, International has reduced waste coolant losses from their engine testing process by 90% through the installation of a closed loop cooling process. In International’s crankshaft machining department, the original straight oil lapping process has been replaced with a synthetic coolant that has reduced oil waste as well as increased process efficiency. Finally, significant improvements in energy management have been attained with the addition of departmental lighting controls, new opportunities with electricity deregulation, and continued upgrades in equipment efficiencies. The facilities efforts to prevent pollution and increase efficiency have resulted in a savings of \$719,370 for 2002.

Sherwin Williams – Minwax is a manufacturing and distribution facility located in Flora. It is the only site in the country that manufactures Minwax wood stains, topcoats, and waxes of both the oil and water-base variety. The project is an “oil-base” wash recycling program designed to find a way to re-use line flush solvent mixed with finished product, which normally leaves the site as hazardous waste. Some production lines were modified to allow this solvent and finished good wash to be collected into 250 gallon steel totes. The material from the totes could then be reintroduced back into new blends as a raw material substitute. The program generated a savings of \$183,840 and 876,840 lbs. of product from April 2002 through March of 2003. Currently there are plans to increase the tote re-use program while concurrently looking at ways to re-use the wash product to make other products.

Eaton Corporation, Lincoln is a leading manufacturer of electrical components for the residential and light commercial/industrial markets. The plant is ISO 14001 certified and in 2002 developed a project to eliminate cyanide from the aluminum busbar plating process. The plant has eliminated three of the four plating solutions containing the cyanide plating process and converted to a non-cyanide technology. The elimination of the cyanide processes will be completed by January 2004. Total elimination of the cyanide equals approximately 15,000 lbs. per year with an estimated savings of \$125,000 per year.

ITT McDonnell & Miller, Chicago is well known for steam and hot water boiler liquid level controls. McDonnell & Miller pioneered automatic regulation for boiler water levels and has been responsible for practically every major development in boiler level controls since 1924. McDonnell & Miller has been focused on pollution prevention for years, and continues to build on previous success. Recent projects have yielded reductions in machining coolant, solvent-based paint, lead solder, and electricity. Recycling the machining coolant has reduced usage by 58%. Process redesign and customer surveys of our steam vents have eliminated 88% of all paint used,

93% in total hazardous waste, and 88% in total VOC emissions. Switching certain parts from lead solder to lead-free solder has reduced the volume of lead solder used by 13%. Consumption of electricity has also been reduced 13% by changing the lighting in manufacturing to energy efficient lamps, and monitoring heavy energy consumption equipment minute-by-minute. Together, these projects have totaled annual savings of \$80,000.

Medium Company

Amersham Health in Arlington Heights is a manufacturer of radiopharmaceuticals that are used by physicians in the diagnosis of disease using various imaging techniques. Since 2001, the company has invested over \$1,100,000 to upgrade lighting, chiller, roof insulation, HVAC and exhaust systems. These improvements coupled with active conservation steps such as the institution of a "Lights Out" program have reduced electrical consumption by 2,000 Megawatts resulting in a savings of \$100,000 in 2002. This energy savings is equivalent to the lighting and heating requirements for 85 single-family homes for a year. The installation of a closed-loop house vacuum system reduced water consumption by 600,000 gallons per year. This resulted in a savings of approximately \$3,000. In 2002, Amersham Health substituted the use of 1,000 gallons of environmentally hazardous ethylene glycol with non-hazardous propylene glycol in the facility chiller systems. The company is also actively involved in recycling. During 2002, approximately 82 tons of paper, cardboard, aluminum, and lead were recycled. Amersham also donated reagent grade chemicals to other companies as opposed to shipping these materials out for treatment and disposal.

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Gleason Cutting Tools Corporation in Loves Park is a leading manufacturer of gear cutting and finishing tools for industry and specialized markets. Gleason is an ISO 9001, Quality Management System, and ISO 14001, Environmental Management System, registered company. As part of the company's efforts to meet Environmental, Health, and Safety improvement goals, Gleason Cutting Tools Corporation has successfully achieved multiple environmental objectives in the past year:

- Reduced solvent usage by 90% or 5,945 gallons a year or \$19,296.
- Plating wastewater reduction by 460% in gallons per piece or \$10.80 per piece savings.
- Paper-recycling program reduced waste by 26% or 630 Cubic yards of solid waste a year, which saved \$8,738.
- Sand Media usage in Heat treat was reduced by 300% by recycling, saving \$ 1,140 a year.

A once Hazardous waste was reduced to a Non-Hazardous waste by changing the formula to eliminate the corrosive characteristic in the waste resulting in a savings of \$3,273.60 a year.

Small Company

Noveon Inc., Henry, IL produces chemical additives for the rubber, plastic, lubricant, coatings and personal care markets. Noveon continues to implement pollution prevention ideas developed by its employees from all departments. The latest effort involved a cross functional team formed by the Site Manager to improve raw material efficiencies and reduce waste, thereby improving product yield. Specifically highlighted for 2002 was optimization of t-butyl amine recovery in one of the rubber accelerator processes. Production of rubber accelerator product is done in a batch reactor, using excess t-butyl amine. Following the reaction, the excess t-butyl amine is recovered via batch distillation under vacuum. By tracking raw material efficiencies and monitoring process parameters, employees recognized that earlier methods of controlling the vacuum valve often caused product to be entrained, leading to condenser fouling. This resulted in lost production time as well as less recovery of t-butyl amine. In 2002, vacuum control was greatly improved by linking the vacuum control valve to the measured heat load on the condenser. As a result of providing greater vacuum control, t-butyl amine recovery has been improved by 5%, reducing loading to the wastewater treatment system by 185,000 pounds annually and saving \$220,000 annually through reduced purchase of t-butyl amine. It cost \$125,000 to implement the improvements. Therefore the total investment was returned to the company in less than a year. This project clearly shows the economic benefits of reducing chemical waste at the point of generation, instead of resorting to post treatment.

Vendor/Supplier

Crazy Horse Concrete, Inc., New Berlin is a ready mix concrete producer. The company earlier installed a system that retains all water and cement mixture, referred to as slurry. The slurry water generates heat and was therefore dumped in a retention area, allowed to solidify and removed as road building material. In 2002 a Water Chilling System was incorporated into the reclamation system to continually cool the slurry, thus allowing it to be used as the main water source for newly batched ready mix concrete. The chiller system reduced the amount of solid material by approximately five to seven thousand tons, which in turn reduced annual removal cost approximately twenty thousand dollars. By allowing the continual use of the slurry water as the main source of mix water, the use of city water has been reduced by approximately 1.3 million gallons of city water with a cost savings of \$4,000 a year.

Service Organization

Argonne National Laboratory Argonne is one of the U.S. Department of Energy's largest research centers. It is also the nation's first national laboratory, chartered in 1946. The Argonne site is located 25 miles southwest of Chicago's loop, occupying approximately 1,500 acres.

Today the Laboratory has more than 4,000 employees. Argonne scientists and engineers work on research projects, ranging from studies of the atomic nucleus to global climate change research. Since 1990, Argonne has worked with more than 600 companies and numerous federal agencies and other organizations.

Argonne has established itself as an environmental leader through the design and execution of a comprehensive and successful Pollution Prevention (P2) Program. The P2 Program has consistently provided leadership in the areas of waste prevention, recycling, affirmative procurement, sustainable design, green chemistry, and environmental remediation, along with other "greening the government" initiatives.

The Laboratory's Waste Reduction, Recycling, and Remediation Programs have provided significant economic benefits to the Laboratory. The reductions in waste have resulted in significant revenues and costs savings to the Laboratory and DOE - - approximately \$11 million since 1996. In addition, the Laboratory's P2 Advisory Committee initiated and continues to perform preliminary waste assessments on high volume/cost waste generators that resulted in annual waste reductions and savings of approximately \$109,000 in FY 2002.

Innovate Illinois Award

The Innovate Illinois Award also was presented to International Truck and Engine Corporation during the Springfield event. The Innovate Illinois award goes to a company that has developed and implemented a new technological innovation. 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. This new technology utilizes the benefits of a catalyzed diesel particulate filter and low-sulfur fuel in combination with an exclusive International engine performance design that significantly lowers the emissions and odor of diesel-powered buses and trucks. The Innovate Illinois Award comes with a scholarship provided by external sources. The scholarship goes to a student at an Illinois college or university.