
Governor's Pollution Prevention Award Winners Histories



The awards are presented annually to businesses, not-for-profit organizations and other waste generators to recognize their achievements in pollution prevention.

Administered by the Illinois Hazardous Waste Research and Information Center, a Division of the Illinois Department of Energy and Natural Resources.

GOVERNOR'S POLLUTION PREVENTION AWARDS

Since 1987, HWRIC has worked with the Illinois EPA and the Governor's Office to recognize the successful efforts of industries and others to reduce the hazardous and nonhazardous wastes they generate via the Governor's Pollution Prevention Awards Program. Below is a history of the award and certificate winners.

FIFTH ANNUAL GOVERNOR'S POLLUTION PREVENTION AWARD WINNERS

AWARDS: Category--Small Business/Industry (100 employees or less)

Sun Chemical Corporation, Kankakee, IL

Sun Chemical Corporation is the world's largest producer of gravure ink. Sun Chemical reduced the generation of two waste streams at this facility. The first waste stream eliminated through process modifications is 95,000 pounds per year of spent non-halogenated solvents. The spent solvent waste stream was generated from a sampling valves manifold used for assuring product quality. The ink manufacturing process was modified to directly reintroduce the samples into the product line. The resulting payback from this process modification has resulted in Sun Chemical saving \$75,000, including recovered raw materials cost and avoided waste disposal costs. Additionally, the corporation reduced the amount of solid, flammable hazardous waste from 60,000 pounds to 54,000 pounds. A steam stripper was installed to remove the volatile organic compounds from the spent filter media (solid, flammable hazardous waste) resulting in the 36,000 pounds of recovered and reused toluene and 6,600 pounds of contaminated and reused water. Sun Chemical is committed to pollution prevention and has in place a team to continuously assess waste reduction opportunities and quality improvements at the facility.

Sun Chemical Corporation, Chicago, IL

Sun Chemical Corporation, General Printing Inks Division, produces packaging ink for the printing industry. The products are manufactured with various solvents, including toluene, ketones, acetates, alcohols, ester, resins and pigments. In 1990, Sun Chemical was able to reduce their volume of waste from 227,313 gallons to 198,215 gallons. At the same time, the pounds of ink they produced increased from 36 million to 41 million pounds. Overall, the facility achieved 13% waste reduction in 1990. Sun Chemical was able to achieve the 13% reduction (over and above a 31% reduction in 1989) by implementing the following: dedication of equipment to specific products, reuse of water rinses into products, reuse and reclamation of cleaning solvents, quality controlled production, utilization of obsolete raw materials and slow moving materials into products, and waste reduction training.

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CERTIFICATES: Category--Small Business/Industry (100 employees or less)

Twinplex Manufacturing Company, Wood Dale, IL

Twinplex, a metal stampings manufacturer, has installed a portable ultrafiltration system used to reduce water content of waste synthetic drawing lubricants prior to disposal. The total volume of waste sent for disposal is reduced by 78% through filtration. Twinplex has also begun to eliminate the use of solvents for cleaning with a potential cost savings of \$15,000 per year.

Chicago Fire Brick Company, Chicago, IL

Chicago Fire Brick Company generates dust from the crushing and sizing of minerals and also generates empty raw material packages. This company successfully recycles 75 cubic yards of dust, and has baled 150 cubic yards of empty raw material packaging. For every dollar spent, Chicago Fire Brick reduces .0589 cubic yards of waste.

First Brands Corporation, Alsip IL

First Brands Corporation manufactures, fills and packages one-gallon containers with anti-freeze. First Brands has been 100% successful in collecting wet and dry high density polyethylene (HDPE) plastic scrap and reintroducing the material back into the process operation. Additionally, First Brands has redesigned its packaging case using 25% less cardboard and has established a company recycling program to collect paper, aluminum and metal.

AWARDS: Category--Medium Business/Industry (101-499 employees)

Advanced Filtration Systems, Inc., Champaign, IL

Advanced Filtration Systems, Inc. (AFSI) manufactures liquid filtration products using fully automated, computer integrated manufacturing (CIM) techniques. An important feature of manufacturing liquid filtration products involves a urethane process which, in the past, generated a large volume of waste. AFSI has redesigned their process for dispensing polyurethane and also the process for handling bulk constituent chemicals and ultraviolet (UV) resin. Consequently, AFSI has eliminated the following:

- 100% of the 144,000 gallons per year of polyurethane/solvent flush waste;
- 100% of the 54 tons per year of methylene chloride emissions;
- 4,070 gallons of isocyanate; and
- 1,450 gallons of UV resin.

Also, AFSI has established a recycling committee to identify markets for scrap materials, to control incoming purchases to avoid loss or waste, and to identify an alternative means of packaging that is more environmentally desirable.

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AGI Incorporated, Melrose Park, IL

AGI Incorporated manufactures and prints compact disc packages and cosmetic folding cartons. AGI utilizes both sheetfed and web offset printing presses, each of which generate waste fountain solution. AGI is successfully redistilling the fountain solution, to recover the isopropyl alcohol component for reuse. Through redistillation, AGI will reduce the amount of waste generated by 90% or 10,400 gallons of waste annually. Up to 9,400 gallons will be returned to the presses for reuse. With the initial outlay for equipment and testing, AGI's payback period is 12 months. The cost savings realized by AGI is at least \$30,000 per year. Although distillation technology is not new, AGI's particular application is considered new to the printing industry. AGI has dedicated a large capital investment in switching to ultraviolet and electronic beam inks to reduce the use of solvents and emission of volatile organic compounds (VOCs). Finally, AGI is aggressively recycling paperboard waste and marketing recycled paperboard products to its customers.

CERTIFICATES: Category—Medium Business/Industry (101-499 employees)

Imperial Eastman, Niles, IL

Imperial Eastman, a component, tool and tube fabricator, has replaced a parts cleaning operation using trichloroethylene vapor degreaser with a water soluble detergent cleaning system. This was not an easy task for the company because of the strict specifications for product quality. After extensive testing and experimentation, the company replaced the degreaser with the detergent system, eliminating 75,509 pounds of trichloroethylene per year.

Apollo Colors, Inc., Rockdale, IL

Apollo Colors, a chemical and printing ink and pigment producer, has initiated a number of activities to prevent pollution and waste. Materials are being collected for reuse, raw material delivery has been streamlined to reduce packaging waste, and Apollo has switched from using mineral oil-based inks to linseed and soy oil-based inks resulting in less volatile organic compound emission at the facility. They have reduced the amount of ink production wastes by 780 cubic yards per year.

Mobil Chemical Company, Joliet, IL

Mobil manufactures polystyrene resulting in a generation of waste styrene/ethylbenzene polymer, waste filters and laboratory waste solvents. Mobil is successfully recycling the laboratory solvents as well as the styrene/ethylbenzene waste streams. The company has reduced the process sampling program to reduce waste and has instigated a rigorous preventative maintenance program. Mobil is also marketing ethylbenzene purge for other industrial uses.

Kraft Food Ingredients, Champaign, IL

Kraft produces edible oils and shortening. The company has an extensive recycling program in place and is also exchanging wastes at a profit. Specifically, Kraft has recycled 54 tons per month of plastic bottles, cardboard, barrels and other miscellaneous debris. They have thus reduced waste generated from 144 tons per month to 50 tons per month, for a 65% reduction. Kraft also sells spent diatomaceous earth for animal feed and spent nickel catalyst for regeneration.

AWARDS: Category—Large Business/Industry (500 or more employees)

Caterpillar, Inc., East Peoria, IL

Caterpillar, Inc., has established a plantwide Environmental and Pollution Prevention Team that reports on a monthly basis on ways to make pollution prevention a plant objective. The team has been successful in systematically reducing the following wastes: ammonia, aluminum oxide, chlorinated/fluorinated solvents, waste oil, and dunnage. Ammonia was selected because of the SARA 313 (Superfund Amendments and Reauthorization Act Right-to-Know) reporting requirements. With a significant amount of time invested, the flowrate of ammonia emissions from heat treat nitriding operations was reduced by 19% with a cost savings of \$3,750. Next, the second largest volume of waste at the facility, aluminum oxide waste generated from metal seal lapping compounds, was reduced to half the amount previously generated with an annual cost savings of over \$530,000. Peristaltic pumps were installed to adjust the flowrate of the lapping compound not only conserving resources and reducing wastes but also improving product quality. Caterpillar has also eliminated three of the six vapor degreasers used at the facility with a cost savings of over \$16,000. A recycling program has been established to recycle weld wire spools, cardboard, wooden pallets and office paper. Waste oil has been recycled and reused at the rate of 52,000 gallons in a 6-month period saving \$118,000.

Illinois Power Company, Decatur, IL

Illinois Power Company has established a pollution prevention program for the purpose of making reduction, reuse, and recycling a way of life among their employees. Thirty-six facility waste minimization coordinators have been assigned the goals of:

- reusing utility poles, tree limbs and ethylene glycol;
- recycling scrap metal, paper, concrete, asphalt, plastic gas pipe;
- eliminating chlorofluorocarbon-based styrofoam;
- requiring suppliers to use returnable containers;
- and burning waste oil for energy recover.

Illinois Power produces a newsletter that provides for exchange of materials between facilities, thus facilitating reuse.

CERTIFICATES: Category - Large Business/Industry - 500 or more employees

Honeywell Inc., Chicago, IL

Honeywell Inc. has reduced the use of chlorofluorocarbons (CFCs) for cleaning circuit boards and miscellaneous parts by 68% or 16,275 pounds. The company decreased the use of flux and thinner generated from wave soldering circuit boards by 80% or 15,852 pounds. For every dollar spent, 1.43 pounds of CFCs were reduced and likewise, for every dollar invested, 1.32 pounds of flux and thinner were reduced. Honeywell has set a goal to eliminate CFCs by 1992.

Abbott Laboratories, Abbott Park, IL

Abbott Laboratories has implemented extensive pollution prevention activities addressing both hazardous and non-hazardous waste generated at the facility. Many types of solvents used at the facility are assessed for reclamation and reuse or burned as fuel onsite. Because of the strict controls necessary for product quality control, many of the solvents reclaimed are not reusable at the facility. However, Abbott is working to modify one product line to eliminate the use of toluene. Additionally, Abbott has established an aggressive salvage and reuse program for office equipment, scrap metal, paper and plastic.

Caterpillar Inc., Pontiac, IL

Caterpillar Inc. manufactures heavy agricultural and construction machinery. The Caterpillar Pontiac facility manufactures diesel fuel pumps and fuel nozzle injectors. This facility has replaced nine vapor degreasers that used freon TMC and 1,1,1-trichloroethane with water-based parts washers. Both the freon TMC and the trichloroethane should be replaced completely by the end of 1991. The cost savings of this waste reduction strategy is \$39 per every reduced pound.

AWARDS: Category-Trade Associations

Chemical Industry Council of Illinois (CICCI) has established the Responsible CARE Program for its Chemical Manufacturers Association (CMA) members. The program is an initiative to improve performance in health, safety and environmental quality through mutual assistance.

CERTIFICATES: Category-Trade Associations

American Electropliers Society - Chicago Branch has a proactive, ongoing program that holds pollution prevention meetings and seminars for members. The program also works to integrate pollution prevention topics and strategies into their programs and publications.

AWARDS: Category-Vendors

Nalco Chemical Company of Naperville for the development of the PORTA-FEED containers. Nalco, a specialty chemical supply company, developed the returnable stainless steel PORTA-FEED container, eliminating the need for disposable chemical drums and the chemical residue that accompanies drums. Since 1984, over 900,000 drums and 900,000 gallons of residual chemical have been eliminated. Nalco has invested over \$76 million toward this effort, and will continue to invest heavily to eliminate all disposable drums by the end of 1993.

CERTIFICATES: Category-Vendors

Ozoteg Inc., a Basic Industry Research Laboratory at Northwestern University, Evanston, for development of a low cost ozone system to destroy cyanide in electroplating rinsewater. The Ozoteg system was developed for Littlefuse, a Des Plaines fuse manufacturer that electroplates most fuse components. The system reduces the cyanide in the electroplating wastestream to cyanate, an allowable discharge. With the use of the Ozoteg system, the plating wastestream toxicity is reduced by up to 99%.

Thermal Fluid Start, Inc., of Plainfield for development of the Comfort Control System (CCS), eliminating the need for cold start of diesel engines. The Department of Energy has estimated that over 390,000,000 gallons of fuel are wasted yearly by idling engines. CCS reduces fuel consumption, air pollution and noise pollution, and increases engine power, engine life, and thus profits for diesel truck and equipment operators. The system uses a specially designed, self-sealing, quick disconnect coupler and a two-way transfer hose to allow diesel operators to start their cold engines with any other hot running engine.

Stericycle, Inc., a Rolling Meadows medical materials processor serving 23 Chicago area hospitals, develops pollution prevention and recycling practices for hospital wastes. Stericycle trains hospital staff to recycle non-infectious medical wastes. As a result, their hospital clients have reduced the amount of infectious wastes generated by 20%, and have realized a 25% cost savings by using the Stericycle process. Stericycle also treats infectious wastes, heating them to a temperature sufficient to kill all pathogens, but not high enough to melt plastics and discharge toxic wastes into the air. Finally, Stericycle recycles plastics recovered from treated wastes in to containers and waste baskets for hospitals.

AWARDS: Category--Educational Institution

Northwestern University, with a student and faculty population of 14,300, established a comprehensive recycling program and initiated an aggressive procurement program. The recycling program collects paper, aluminum, newspaper and glass from educational and administrative buildings, residence halls, and for some special accounts. The amount of material recycled is equal to 685 tons per year. The procurement program emphasizes recycling: 44% of all copy paper purchased for the University is recycled paper.

CERTIFICATES: Educational Institution

Streator Township High School established a recycling program. Prior to the initiation of the school-wide recycling program, Streator High sent approximately five dumpsters (or 30 cubic yards of waste) to the landfill every week. The recycling program has enabled the school to reduce their dumpster pickup from three to two times per week. Each classroom teacher has recycling boxes for newspapers, bottles and aluminum cans. The cafeteria collects aluminum cans and glass bottles. The school custodians have large recycling collection boxes that are used to separate recyclable materials from other waste. The program relies on volunteer labor. Participation has been excellent.

CERTIFICATES: Category--Community Groups

Chicagoand Bicycle Federation established an educational program to promote bicycle use, especially for short two-mile runs. In cooperation with the Chicago Lung Association, the Federation began a "Two by Two Challenge" urging citizens to exchange two of their auto excursions for the efficient two-wheeled transportation of bicycles. The Challenge was launched during Clean Air Week in May. The Federation's press releases, advertisements and brochures urged people to pledge to take the Challenge, emphasizing that a four mile roundtrip by bike can prevent almost 15 pounds of auto pollution from contaminating the air.

The *Aurora Sanitary District (ASD)* promotes waste reduction and pollution prevention through its industrial treatment program and community outreach. ASD's wastewater treatment facility is one of the most advanced in the nation. Improvements and programs at the facility have been implemented without increasing residential user's fees, which have remained constant for nine years. Some of ASD's pollution prevention strategies include: land application of sludge for an estimated annual savings of \$250,000; a laboratory quality assurance program and an engine generator cogeneration project that have facilitated estimated annual energy conservation savings of \$211,000; and monitoring of the plant's effluent stream to the Fox River above and beyond the monitoring requirements of the facility's permit. ASD successfully promotes its program to the community through the "Effie Effluent" and the "Giving Water a Second Chance" public awareness campaigns.

FOURTH ANNUAL GOVERNOR'S POLLUTION PREVENTION AWARD WINNERS

AWARDS: Category--Small Business/Industry (150 employees or less)

Four Star Tool, Inc., Rosemont, IL

Four Star Tool, Inc., has completely changed their degreasing operation. In the past, Four Star used 1,1,1-trichloroethane for degreasing. During 1989, the company replaced 100% of the 1,1,1-trichloroethane with D-Limonene, an oily extract from the rinds of citrus fruits capable of separating oils and greases from any surface to which they adhere. The waste reduction technology which has been used is raw material substitution. The process has eliminated 1,350 gallons of waste trichloroethane per year and resulted in a complete reduction of toxicity exposure.

Iel Rail Corporation, Danville, IL

Iel Rail Corporation has been successful in encouraging waste reduction in their industrial coating processes. Iel has purchased an on-site distillation unit to recover their waste solvents. Additionally, Iel has implemented a training program for its employees through the Danville Area Community College. The training program has been designed to educate employees in proper application processes of industrial coatings. For 1989, Iel recovered 25% of their waste solvents. For 1990, Iel projects a 75% reduction of waste through better application of paints and coatings and reclamation of solvents.

BASF Corporation, Chicago, IL

BASF Corporation manufacturers packaging ink for the printing industry. During the manufacturing of these inks, various solvents have been used such as toluene, ketones, acetates, alcohols, etc. In 1989, BASF has reduced waste streams including solvents overall by 34%. BASF has implemented source segregation, equipment modification, material reuse and recycling, and treatment to achieve the 34% reduction rate. Water rinses were reused in product lines, solvent washes were used more efficiently, and waste solvent was reclaimed.

AWARDS: Category--Medium Business/Industry (150-499 employees)

Ohmite Manufacturing, Skokie, IL

Ohmite Manufacturing has improved their degreasing operations by purchasing a more efficient degreasing unit and by replacing the use of trichloroethylene with 1,1,1-trichloroethane. The result was a 52% reduction in air toxic emissions.

United Technologies Automotive, Wheeling, IL

United Technologies Automotive has converted their degreasing unit by installing an automatic transport system to reduce fugitive emissions by 81%. Additionally, the vapor degreaser solvent has been converted to use 1,1,1-trichloroethane instead of freon 113, a chlorofluorocarbon. The waste reduction technologies implemented include equipment modification and raw material substitution.

Interlake Company Inc., Pontiac, IL

Interlake Company Inc., has reduced their spent solvents by on-site distillation in their process of painting fabricated steel storage racks. Additionally, the used paint filter media has been compacted to reduce volume. The reduction of waste solvents and paint filter media totals 13,805 gallons or 49%.

AWARDS: Category--Large Business/Industry (500 or more employees)

Caterpillar, Inc., Joliet, IL

Caterpillar Inc., has modified their chrome plating operations to recover the chrome and to reduce the volume of waste plating sludge. Rinsewater from three plating lines has been filtered, precipitated and clarified to isolate chrome contaminated rinsewater. The amount of the waste treatment sludge generated was reduced to 16 cubic yards per month from 177 cubic yards per month, or a 91% reduction. The recovered chrome has been reused in the plating operation.

Motorola, Inc., Arlington Heights, IL

Motorola, Inc., has aggressively pursued new circuit board cleaning technology to eliminate the use of freon 113, a chlorofluorocarbon. Freon elimination and reduction achievements have included on-site recovering waste Freon for reuse and installing leak detectors to check for freon leaks. Motorola worked on further reduction technology and anticipated a 20% reduction in freon consumption per unit of production.

Searle & Company, Skokie, IL

Searle Company has a program in place to reduce the volume and toxicity of waste generated to the degree economically practicable. Specifically, Searle saved 35,777 gallons of solvent waste from hazardous waste incineration through fuel blending. Searle also improved their waste process in their pilot plant to recycle over 5,000 gallons of dichloroethane wastes. Laboratory workers have been trained in waste reduction methods for laboratory wastes.

AWARDS: Category--Not-For-Profit

Wildlife Prairie Park, Hanna City, IL

Wildlife Prairie Park established a comprehensive recycling program to reuse food wastes, conserve water and to reuse discarded construction materials for sidewalks and fences. Creosote-soaked telephone and utility poles have been used to make fences in the Lincoln Trail area. Reusing the poles avoids the generation of the toxic fumes produced when discarded poles are burned.

THIRD ANNUAL GOVERNOR'S POLLUTION PREVENTION AWARD WINNERS

AWARDS: Category--Small Business/Industry (100 employees or less)

Moline Paint Manufacturing Company, Moline, IL

Moline Paint Manufacturing Company specializes in industrial finishes. They have reduced waste generation at their facility through waste reduction management strategies, material reuse and recycling, and process modification. Company employees have been trained to maintain inventory control and keep daily records of waste streams generated and reduced at the facility. Employees have been encouraged to reduce wastes and are rewarded with quarterly incentive bonuses dependent upon the percentage of waste streams reduced. This practice raises employee environmental awareness and involves staff in an ongoing waste reduction program. The modification of Moline's batch process resulted in a 10% reduction of hazardous waste generated per gallon of processed product. The process involves material reuse of paint-laden xylol from mill and blender washing of a specific batch and color into the next identical batch and color as a raw material has.

AWARDS: Category--Large Business/Industry (101-499 employees)

Johnson & Johnson Health Care Company, Lemont, IL

Johnson & Johnson greatly reduced the hazardous by-products generated from their manufacturing of home health care products. The company began operations at its Lemont site in the early 1980s and at that time established a corporate policy to generate minimal or no hazardous wastes. With this corporate commitment, as well as through management strategies, raw material substitution, and process modification, Johnson & Johnson has reduced the generation of hazardous waste by a total of 58,568 gallons, or 97.61%. Johnson & Johnson employees have accomplished this exemplary reduction of waste by evaluating all work operation using solvents, (xylene, toluene, and 1,1,1-trichloroethane) and either eliminating the use of these solvents or substituting less toxic solvents. Employees have changed from using solvent-based coatings for adhesive application on the backside of tape and bandages to using

water-based emulsions. Plant maintenance and cleaning operations have also been evaluated by employees for the unnecessary use of solvent cleaners. Consequently, the use of a flammable, solid floor stripper has been eliminated; the use of 1,1,1-trichloroethane for cleaning lift trucks was eliminated and replaced with a hot steam/washer wash process; and the xylene equipment cleaner has been substituted by a mineral spirit solvent which is less toxic.

AWARDS: Category—Community Association

Illinois Agricultural Association Employee Recreation Association, Bloomington, IL

The Illinois Agricultural Association (IAA) Employee Recreation Association has established a "Waste Not Recycling Program" which produces high-quality paper from waste paper. The program was the result of waste reduction management strategies and material reuse and recycling. Each employee of the IAA and its affiliated companies has been provided a container for collecting recyclable material at his or her desk. The recyclable material is collected daily from each department and packaged for pick up by a local firm. Funds from the sale of the recyclable material have been used to sponsor employee recreation activities. Through the "Waste Not Recycling Program," the Association has helped to conserve energy and reduce the air and water pollution associated with the production of paper. Since the Association's origin in 1974, employees' efforts have saved approximately 19,228 trees by collecting 1,131 tons of paper.

AWARDS: Category—Educational Institution

Industrial Waste Elimination Research Center of the Illinois Institute of Technology, Chicago, IL

The Industrial Waste Elimination Research Center was established in 1980. The Center's research has been on multimedia (involving air and water pollutants and solid wastes), with a focus on in-plant control with three priorities:

- methods for recycling, recovery and reuse of by-products of industrial processes;
- modifications of manufacturing processes to avoid or reduce generation of wastes, and
- developing clean manufacturing technologies that minimize or eliminate the generation of pollutants.

Examples of the Center's waste reduction research areas include metals speciation, separation, and recovery, conversion of chlorinated hydrocarbon containing wastes into useful products and evaluation of the dynamics of multi-component sorption/desorption.

SECOND ANNUAL GOVERNOR'S POLLUTION PREVENTION AWARD WINNERS

Automotive Wholesalers of Illinois, Springfield, IL

The Automotive Wholesalers of Illinois initiated an assistance program to aid its membership (mostly automotive job shops and machine shops) with environmental compliance. The program publishes a practical compliance manual, organizes informational seminars, and publishes compliance and waste reduction tips in newsletters.

Illinois Benedictine College, Lisle, IL

Illinois Benedictine College has converted its educational laboratories to microscale glassware and experimental apparatus. Through this conversion, lab chemical usage has been reduced by 95% or more. This has resulted in improved environmental control by reducing amounts of spent chemicals requiring disposal. Significant cost savings have been achieved through reduced chemical purchases.

Omni Circuits, Inc., Glenview, IL

Omni Circuits, a manufacturer of printed circuit boards, has implemented several process modifications that recover and reuse organic solvents and metal plating solutions. These modifications have greatly reduced the amount of sludges and spent solvents which must be shipped off site for disposal. Additionally, any new pieces of equipment introduced into the work place are examined to determine how they can best be used to reduce waste.

Borg-Warner Chemicals, Inc., Ottawa, IL

Borg-Warner, now GE Plastics, implemented a facility-wide corporate management plan to reduce waste generated in all phases of its operation. Waste minimization teams have been established utilizing both management and line personnel to evaluate in-plant processes and practices for possible reduction of waste generation. Educational programs have been initiated to make all employees aware of the need for waste reduction. Recovery systems have been initiated for both hazardous and nonhazardous materials, resulting in yearly savings of well over one million dollars.

MPI Label Systems of Illinois, Inc., University Park, IL

MPI converted their label making operations from the use of organic solvent-based inks to less toxic water-based inks. This greatly reduced their generation of hazardous wastes. The plant took many steps to encourage their customers to use water-based inks in their operations.

FIRST ANNUAL GOVERNOR'S POLLUTION PREVENTION AWARD WINNERS

Solvent Systems International, Inc., West Dundee, IL

Solvent Systems has developed mobile distillation units for on-site reduction of solvent waste streams. The method eliminated the need for transportation of wastes, reduced the amount of wastes, and has recycled usable materials. The system consists of four major parts: a distillation vessel, an energy source, a heating medium, and transportation equipment. The system currently has capacity to process 10,000 gallons per week.

Safety-Kleen Corporation, Elgin, IL

Two thousand dry cleaners in the state annually generate 9,000,000 pounds of perchloroethylene waste. For many small shops, it has not been cost effective for individual companies to try to reduce their wastes. The Safety-Kleen dry cleaner waste recovery service has processed 976 firms' wastes by distilling and recycling the perchloroethylene. In so doing, Safety-Kleen attained a waste reduction of 99.9% for waste perchloroethylene.

Continental/Midland, Inc., Park Forest, IL

Continental/Midland uses a system from Alar Engineering Company (Mokena, IL) which handles wastes from their metal finishing operations. The system produces a dry, inert, nonleachable filter cake which can be landfilled. In addition, a caustic washing system has replaced a more toxic trichloroethylene vapor degreaser. The company has processed 3,000 gallons of various oils and water emulsified coolants on-site. At this time, Continental/Midland's only waste stream is 90 cubic yards per year of dry, inert, nonhazardous powder.

General Motors Corporation, Central Foundry Division, Danville, IL

Three different waste reduction technologies have eliminated over 100,000 cubic yards of hazardous waste. Central Foundry Division has developed a process to treat accumulated wastewater treatment sludge which is high in lead and cadmium. Newly generated wastewater is now being treated with a different coagulant (ferric sulfate) in order to produce a nonhazardous sludge. New raw materials used in production have also resulted in less cadmium and lead in the waste. Scrubbers clean gas used in production before it is released to the air. Waste sulfuric acid from these units was formerly a corrosive hazardous waste. The company installed a new self-neutralizing unit to eliminate the waste.

For additional information, please contact:

**Hazardous Waste Research and Information Center
One E. Hazelwood Drive
Champaign, Illinois 61820**

Phone: 217.333.8940

Fax: 217.333.8944