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Governor's Pollution Prevention Award, 1996 Recipient **Columbus Coated Fabrics**

Columbus Coated Fabrics reduced Toxic Release Inventory volatile organic compounds by 93.5% and hazardous waste by 35% from 1987 to 1995. Through several pollution prevention programs, the company is saving \$1,698,940 annually.

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986. Columbus Coated Fabrics was one of eight recipients to receive the Award in 1996. These awards recognize outstanding commitment to improve Ohio's environment through pollution prevention. Evaluation criteria for the awards include: the reduction of waste at the source, recycling or recovery of materials, cost-effectiveness, ability of the program to serve as a model for others, and effectiveness in promoting prevention as the preferred long-term approach.

What is Pollution Prevention?

Pollution prevention is the use of source reduction techniques to reduce risk to public health, safety, welfare and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. Pollution prevention avoids cross media transfer (of wastes and/or pollutants) and is multi-media in scope, addressing all waste

and environmental releases to the air, water and land.

Columbus Coated Fabrics

Columbus Coated Fabrics (CCF), owned by Borden Inc., produces wall coverings for commercial applications, decorative vinyl films that are laminated by customers to the surface of wallboard, wood and metal substrates to manufacture building panels, furniture, appliances and automotive items, and specialty vinyls for medical packaging and other uses.

CCF was recognized for making tremendous strides in reducing toxic emissions and generation of hazardous and solid waste, and meeting its goal for U.S. EPA's 33/50 program. CCF reduced Toxic Release Inventory volatile organic compound emissions (those required to be reported under the Federal Right-To-Know law) by 93.5 percent from 1987 to 1995. CCF also reduced hazardous waste by 35 percent from 1987 to 1995 and eliminated more than 1,000



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tons of various wastes and/or emissions, not including the 5.5 million pounds of PVC sent for off-site recycling annually since 1987.

CCF is an environmentally responsible manufacturer committed to producing quality products that reflect responsible and balanced health, safety, and environmental values. The continuous investment of time and resources into state of the art technology, process review, source reduction, chemical reformulation and dedicated, trained personnel, as well as waste reductions of more than 1,000 tons since 1987, demonstrate this commitment to good stewardship and CCF's leadership in its industry as a responsible manufacturer.

Pollution Prevention Activities

CCF demonstrated its environmental commitment through a successful, strategic approach to pollution prevention. This section briefly describes the major projects and initiatives that were instrumental in CCF's pollution prevention success.

Installation of a High Pressure Water System

CCF installed a high pressure water system instead of using solvent to clean drums. This

resulted in a reduction in VOC emissions 100 tons per year.

Reduction of Solvent Ink

CCF reduced the solvent ink required for production runs by recycling and installing low-volume ink supply systems. This reduced 100 tons per year of VOC emissions.

Tight Head Snap-On Lids

CCF maintained tight head snap-on lids on all in-process drums to minimize evaporative solvent losses, resulting in a 45 tons per year reduction in VOC emissions.

Development of Non-Cadmium Stabilizers

The CCF technical department actively pursued the replacement of predominately cadmium-based vinyl stabilizers with non-cadmium-based vinyl stabilizers. All but a few minor products have been converted, resulting in a significantly less toxic wastestream.

Reduction of City Water Usage

CCF reduced its city water consumption by 51 percent, primarily by using on-site tower recirculation water instead of once-through city water. This resulted in a net reduction in water consumption of more than 43 million gallons per year.

Safety, Quality and Productivity Team

A labor/management SQP team was formed to address waste reduction. Waterbased ink was targeted as the focus wastestream. Operator education and process techniques were reviewed and modified, resulting in less waste. This resulted in a 20 tons per year reduction in non-hazardous waste.

Increase in Reusable Packaging

CCF increased reusable packaging and found outlets for scrap vinyl to reduce landfill requirements. This resulted in 66 percent reduction in waste including 5.5 million pounds of PVC recycled per year.

Replacement of the Solvent Pan Wash Tank

CCF replaced the solvent pan wash tank with a redesigned low-emission unit, resulting in a 40 tons per year reduction in VOC emissions.

Installation of an Air Cleanup System

CCF installed an \$8 million air cleanup system that controls the temperature of the print department's environment and reduces air flows by 67percent. The combination of precise temperature control and re-

Columbus Coated Fabrics

duced air flow minimizes evaporation, decreases the energy requirements for air movement, reduces employee exposure levels and improves product quality. This program has resulted in an annual reduction in VOC emissions of more than 500 tons.

Isolation of Printer Wash Solvent

CCF isolated printer wash solvent for disposal instead of combining it with reusable ink, improving the ink quality and resulting in an overall decrease in scrap ink production of more than 30 percent. This also reduced 150 tons in hazardous waste.

Reformulation of VOC Coatings

The coating reformulations eliminated the use of triethylamine as a catalyst, resulting in an annual decrease of more than 56,000 pounds of emissions.

Ohio Prevention First

CCF is an active participant in the *Ohio Prevention First* initiative. *Ohio Prevention First*, established at the request of Governor Voinovich, is a voluntary planning initiative seeking a reduction in pollution generated throughout Ohio. This initiative provides an

important opportunity for businesses and industry to take a leadership role in environmental protection without the need for additional regulatory mandates.

Environmental and Economic Benefits

The projects have improved the environment by either reducing the pounds of pollution that are released into the environment or by replacing a toxic pollutant with a less toxic material. The many pollution prevention activities have resulted in more than 1,000 tons of waste and air emissions and more than 43 million gallons of water discharges have been eliminated from CCF's annual totals since 1987. The company has a total annual cost savings of \$1,698,940 as a result of these activities.

Management Commitment and Employee Involvement

CCF has made tremendous strides in reducing toxic emissions and generation of hazardous and solid waste. These accomplishments are the result of a management team committed to health, safety, and environmental excellence, from the senior operating managers at Borden to the site managers and associates at CCF.

Transferability

Ohio EPA has used this facility as an example to other industries of what P2 can do. Tours are given by knowledgeable individuals for any interested group and/or company. Technology is shared and information is provided to the best of the company's ability.

For More Information

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This is the 40th in a series of documents Ohio EPA has prepared on pollution prevention. For more information, call the Office of Pollution Prevention at (614) 644-3469.

The Office of Pollution Prevention was created to encourage multi-media pollution prevention activities within the state of Ohio, including source reduction and environmentally sound recycling practices. The Office analyzes, develops, and publicizes information and data related to pollution prevention. Additionally, the Office increases awareness of pollution prevention opportunities through education, outreach, and technical assistance programs directed toward business, government, and the public.

Office of Pollution Prevention WWW address: www.epa.ohio.gov/opp