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Pollution Prevention

**Governor's Pollution Prevention Award  
Recipient - Whirlpool Corporation,  
Clyde Division**

*Whirlpool Corporation's Clyde Division has shown that reducing, reusing and recycling are not a hindrance to growth. The division has reduced landfill tonnage by more than half while increasing production by 25 percent.*

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986. Whirlpool Corporation, Clyde Division, received one of five awards given in 1995. Governor George V. Voinovich presented the eighth annual awards on February 7, 1995.

These awards recognize outstanding commitment to improve Ohio's environment through pollution prevention. Evaluation criteria for the awards included: the overall effort to reduce waste at the source, recycle or recover materials, or conserve energy; soundness of approach; 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 transfers of wastes and/or pollutants and is multi-media in scope, addressing all waste and environmental releases to the air, water and land.

**Whirlpool Corporation,  
Clyde Division**

Whirlpool's Clyde Division, Clyde, Ohio, is the largest automatic washing machine plant in the world, covering approximately two million square feet and employing more than

3,200 people. This plant's facility-wide pollution prevention program has resulted in a 70 percent reduction in solid and hazardous waste, and has reduced the amount of waste generated per washing machine from 4.57 pounds to 1.36 pounds.

**Pollution Prevention Activities**

The Clyde Division's Environmental Engineering Department works as a team to integrate pollution prevention throughout the entire plant, and takes a leading role in education and identification of opportunities throughout the facility. Plant employees are actively and enthusiastically involved in pollution prevention efforts.

All reductions have been achieved despite the plant's increased produc-

tion of washing machines by 25 percent over the last six years. Overall accomplishments include a 63 percent reduction in landfill tonnage, and a 54 percent reduction of 33/50 Program chemicals by 1992, which surpassed the program's 1995 goals.

The Clyde Division's cost-effective reductions have been achieved through a variety of source reduction and recycling activities. Material, equipment and process changes in the painting department have resulted in a reduction in solvent use and recycling of cleaning solvents, reducing related hazardous waste generation by 59 percent, or 62,000 pounds. It also has resulted in a 45 percent reduction in waste paint filters.

The implementation of powder coating of porcelain material has resulted in reduced



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wastewater generation, and a 90 percent reduction, or 900,000 pounds, in related solid waste generation. Modification of collection and packaging procedures of waste materials has resulted in an 85 percent reduction of contaminated packaging material.

A variety of materials are recycled by the Clyde Division. Scrap metal recycling includes more than 30,000 tons of scrap annually. Often, scrap from one operation is used in another operation within the plant. Waste oils, such as hydraulic and cutting oils, are recycled and reused in manufacturing. Last year, more than 40,000 gallons of waste oil were recycled, resulting in substantial cost savings.

In 1991, the plant began a partnership with a recycling firm. The result was a material recovery operation located inside the facility, responsible for the segregation and recycling of polyethylene, metal banding, plastic drums, foam packaging wrappers, cardboard, metals, scrap wire, glass, rubber, wood pallets, several types of plastics, and other miscellaneous recyclables. This program allows for cost-effective sorting and

recycling of even small volumes of materials that typically would not be recycled. Since this program began in 1992, there has been a 50,000 pound per month reduction in trash going to the landfill.

The plant has been using returnable packaging for internal parts and some external materials for many years. For example, the use of returnable packaging for timers has eliminated almost 350 tons per year of cardboard scrap. Most chemicals also come in returnable containers, often in bulk quantities.

The Clyde Division has made a number of presentations about its experiences, and participates in the 33/50 Program and the Green Lights Program. It has been widely recognized for its pollution prevention efforts.

## Looking Ahead

Whirlpool, Clyde Division, currently is completing installation of a coating process for washing machine cabinets that will partially replace a current process. This will result in reductions in both volatile organic compounds and

solid waste generation. Objectives will continue to be set annually that place incentives for reducing the amount of waste generated throughout the plant. Several projects listed in the division's strategic plan identify environmental benefits that will help achieve pollution reductions at the source through changes in processes and raw material reformulations.

The Clyde Division also plans to continue training and awareness education for the employees and the community, to emphasize the importance of pollution prevention activities and promote the fact that success depends on everyone's involvement.

## For More Information

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This is the twenty-sixth in a series of fact sheets 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.