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Pollution Prevention

Governor's Pollution Prevention Award Recipient

Walbridge Coatings

Walbridge Coatings' efforts demonstrate one of the proven facts about pollution prevention -- reducing the amount of waste generated can save a business money.

Governor George V. Voinovich

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986. Walbridge Coatings was one of five recipients to receive the Award in 1993. Governor George V. Voinovich presented the seventh annual awards on December 9, 1993. 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.

Walbridge Coatings

Walbridge Coatings was recognized for its aggressive metals recovery and reclamation program.

Located in Walbridge, Ohio, Walbridge Coatings

produces electrogalvanized zinc and zinc-nickel cold rolled steel primarily for the auto industry. Walbridge was originally commissioned as a coil coating line in 1981. In 1986 it modified its line to an electrogalvanizing line. The facility uses a GRAVITEL technology developed by the ARUS/Andritz-Ruthner Company of Vienna, Austria. In 1989 Walbridge also modified its line to allow zinc-nickel alloy to be produced. The coating line has an installed rectifier capacity of 1,000,000 amperes and is rated at 4,000 tons of product per year.

Pollution Prevention Activities

Walbridge's corporate responsibility to the community and the environment is demonstrated

in its aggressive pollution prevention activities.

In 1989 the company began a metals recovery and reclamation program. A literature review of metal recovery failed to show any recovery system in operation of similar size that had the characteristics Walbridge required. The company selected four systems for further evaluation: evaporation; reverse osmosis; electro dialysis; and ion exchange. After over a year of research and engineering, it was decided that ion exchange was the most appropriate means of recovering zinc and nickel. Walbridge decided to install short-bed, reciprocating flow ion exchange. Initial testing indicated that 90% of the metals could be recovered. However, the actual process yielded 95%

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recovery of metals. Furthermore, Walbridge has found off-site companies that recover the remaining 5% of the metals and return them to Walbridge for reuse as feed stock. This feed stock is actually more efficient to use than the zinc pellets the company normally uses.

During this same time period, extensive efforts were made to find uses for the remaining materials which were not recoverable by the ion exchange method. These maintenance type waste streams were deemed "dirty", and might contaminate the ion exchange system. Walbridge was successful in its efforts, and in 1991 placed 600 tons of material as feed stock for other industrial operations. Further development of secondary sources resulted in the placing of over 925 tons in 1992.

These combined efforts resulted in an annual reduction of better than 1,800 tons of sludge. Although the project cost over \$3,000,000, the payback was only one and a half years. In addition to a savings of over \$2,000,000 per year, this project reduces long term liability and demonstrates corporate

responsibility to the community.

Walbridge Coatings has also communicated the benefits of waste minimization to others. Walbridge representatives have spoken before groups such as the Society of Manufacturing Engineers, the Ohio Water Environment Association, the Cleveland Advanced Manufacturing Program (CAMP) and the Ohio EPA.

Furthermore, Walbridge Coatings was previously recognized for its efforts when the City of Toledo honored it with the "1992 Mayor's Environmental Advisory Boards - Green Business - Award".

Looking Ahead

Walbridge Coatings is continually undertaking pollution prevention activities. Employees from all departments have formed a facility Pollution Prevention Team. The team has established a pollution prevention policy and has gained the support of upper management for its implementation. The team continues to search for ways to reduce the amount of raw materials used.

Presently, Walbridge is studying UV/EB curing (ultraviolet or electron beam curing) in order to reduce the VOC's (volatile organic compounds) used as a carrier for paint. This method would reduce stack emissions and decrease the amount of natural gas required in the operation.

The company is also examining the possibility of replacing the heat evaporator system with a sludge freeze drying system. The freeze method is more energy efficient and eliminates air emissions.

Walbridge is evaluating reclaiming hydraulic and lubricating oils. Efforts are already under way to eliminate waste pallets through reconditioning and reuse. Finally, water reuse and raw material substitutions are all being reviewed for possible further reductions.

For More Information

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This is the twenty-first in a series of fact sheets that 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 the multimedia 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.