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Governor's Pollution Prevention Award, 1998 Recipient

Hedstrom Corporation

The Hedstrom Corporation is being recognized for:

◆ ***reducing volatile organic compound emissions by 70 percent,***

◆ ***eliminating 64.6 tons of waste,***

◆ ***reducing hazardous waste generation by more than 60 percent, and***

◆ ***recycling 192 tons of polyvinyl chlorine scrap.***

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986.

Hedstrom Corporation was one of seven recipients to receive the Award in 1998. These awards recognize outstanding commitments 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 pollution prevention as the preferred long-term approach for environmental management.

Hedstrom Corporation

Hedstrom Corporation manufactures vinyl playballs. The facility is located in Ashland, Ashland County.

Pollution Prevention Activities

Hedstrom reduced the amount of volatile organic compounds (VOC) emissions through the installation of equipment which is protected by trade secret law. Though they were eager to reduce the VOC emissions, they also had to be concerned about the high quality of customer products with newly developed artwork. After a three year study that was completed in 1997, Hedstrom reduced VOC emissions by 69.5 percent. In 1996, Hedstrom used 87 tons of chemicals. In 1997, they used 37 tons of chemicals. Because of these reductions, they no longer had to store their chemicals in underground storage tanks, thus reducing the risk of contamination to the ground water and soil. The new equipment eliminated the generation of excessive hazardous waste by 62.5 percent. The savings realized allowed for the purchase of new equipment.



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Reuse of Gloves and Rags

Along with the major change in the manufacturing process of their vinyl playballs, Hedstrom implemented programs for the reuse of gloves and rags. Previously, the gloves and rags were used and discarded when soiled. Hedstrom purchased an industrial washer and dryer, provided collection bins for the soiled materials, and established in-house labor to collect them and wash these items. With this process, Hedstrom now reuses their rags and gloves on the average of three times before they are discarded. In 1997, Hedstrom purchased a total of 30.35 tons of gloves and rags which means that the company minimized 64.6 tons of waste going to the landfill.

Recycling PVC Vinyl Scrap

In 1997, Hedstrom sold polyvinyl chloride scrap (PVC) to several customers for recycling. In 1997, 192 tons of this material was sold. With any process, there was a generation of contaminated vinyl regrind that Hedstrom could not reuse. Markets were found and a total of 26 tons of this material was recycled. A problem for any business that manufactures these types of products is that the raw materials become obsolete or color change is necessary. Efforts by the

Hedstrom staff to find markets for the obsolete raw materials resulted in 7.2 tons of materials being recycled for reuse in 1997.

Change in Blow Molding Machines

Hedstrom developed a new design to add to their blow molding machines. Each time a part is made, 70 percent of the material did not go into the part and was discarded as scrap. Now, the scrap is ground and mixed with virgin resin and pigment, then placed back into the manufacturing process until all of this scrap is reused.

Other Projects

Plastic Recycling In 1997, Hedstrom purchased 248 tons of resin which is delivered in plastic bags. The plastic bags used to handle this product were being landfilled.

Hedstrom found a buyer for these bags and 18.5 tons of these bags were sold to that new customer. Other items recycled by Hedstrom were 146.73 tons of cardboard, 50.6 tons of scrap metal, 6.2 tons of office paper and aluminum beverage cans.

Polyethylene Recycling The polyethylene department joined the recycling process. Now all scrap is cut and sold to a customer. This same customer sells reprocessed materials back

to Hedstrom. In 1997, 134.45 tons of materials were recycled. Hedstrom purchased back from this company, 45 tons of the black polyethylene.

Wood Pallet Recycling The wood pallets that are not reusable are recycled for buy back. Hedstrom recycled 13 tons of wooden pallets and 60 percent of these pallets were purchased back.

Soluble Oil Recovery

Hedstrom also recycles used oil. A specified container was established, and all scrap oil is placed in this unit for recycling. Hedstrom recycled 4 tons of waste oil in 1997.

Environmental Benefits

Hedstrom established a partnership with their workforce and created a program that is a benefit for the company as well as the employees working in the facility. By reducing air emissions and hazardous waste, Hedstrom provides a healthy working environment while reducing operation costs. Hedstrom reduced VOC emissions by 69.5 percent. The facility reduced the generation of hazardous waste from eight tons to three tons, a 62.5 percent reduction.

The buying back of recycled materials in the process and reuse of these materials is a

Hedstrom Corporation

great benefit to the environment by eliminating the need to landfill material. The reuse of the gloves and rags exemplifies the employee involvement in the process. The recycling of the scrap oil is a great environmental benefit offered by Hedstrom. The oils recycled reducing the potential of a spill and subsequent contamination.

The summary of reductions, recycling or reuses of items are as follows:

- VOC emissions were reduced by 69.5 percent,
- Reductions in hazardous waste generation is 62.5 percent,
- Gloves and rags laundered minimized 64.6 tons of waste,
- PVC scrap recycling saved 192 tons which was sold to customers,
- Contaminated PVC scrap reused 26 tons which was sold to customers,
- Obsolute PVC color/compound was reused saving 7.2 tons in 1997,
- Blow Molding operations changes created the reuse of vinyl for a minimization of 580 tons of resin,
- 18.5 tons of plastic bags were recycled, and
- 134.45 tons of scrap polyethylene were recycled and 45 tons procured back for reuse.

Economic Benefits

The recycling figures show the long term savings for Hedstrom in avoided landfill costs, and the costs to have dumpsters placed at the facility and picked up. Hazardous waste removal cost from the facility was eliminated, saving an estimated \$88,000 per year. Hedstrom reduced the amount of rags and gloves that need to be ordered by one third. This is a large savings that will in a short period of time fund those washers and dryers that are used to laundry these items.

Health and Safety Benefits

The reduction of VOC emissions, oil recycling and reuse or minimization of vinyl PVC benefits both employees and the environment. An employee will not be exposed to emissions from the paint that is placed on the balls. Even with proper breathing apparatuses, paint fumes had bothered employees who worked near those areas. Through use of new equipment that reduced VOC emissions by 69.5 percent, employees benefit through less fumes being emitted.

Management Commitment

These projects were a joint venture between management and labor at Hedstrom. The facility has a very aggressive committee that works with management to discover ways to reduce, recycle, and reuse waste. The facility has meetings, luncheons and awards that are used as incentives to help continue to locate the many pollution prevention ideas that are used. Hedstrom has a comment box and will pay employees a \$100 bonus for any suggestion that will reduce waste, increase safety, or reduce costs.

Transferability

Hedstrom implemented the pollution prevention projects at their other locations in Reno, Nevada; Carrolton, Texas; and Dothan, Alabama. The equipment which reduced VOC emissions are available for other similar operations.

For More Information

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This is one in a series of documents Ohio EPA has prepared to promote pollution prevention activities in Ohio and integrate pollution prevention into Ohio EPA programs. 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 in Ohio to reduce risk to public health, safety, welfare and the environment. Pollution prevention stresses source reduction and, as a second choice, environmentally sound recycling while avoiding cross media transfers. The Office develops information related to pollution prevention, increases awareness of pollution prevention opportunities, and can offer technical assistance to business, government, and the public.

Office of Pollution Prevention WWW address: www.epa.state.oh.us/opp