

4.6.3 Plastics Manufacturing: Printing and Laminating

Case Study #1

BUSINESS: C&H Packaging Company; Merrill, Wisconsin

WASTE ORIGIN: Plastics Printing and Laminating

WASTE TYPES: Production Scraps (Polyethylene Plastic, Corrugated Cardboard, Packaging Cores), Volatile Organic Compounds (VOCs), Solvent-based Printing Inks, Cleaning Solvents (Methyl Ethyl Ketone), and Laminating Adhesives

COMPANY BACKGROUND:

C&H is a quality printer and laminator of flexible plastic packaging used for meat, cheese, and snack foods. Established in 1986, the company employs 85 people.

MOTIVATION:

Reduce hazardous VOC wastes and their air emissions. Reduce the company's solid waste volume and associated landfill disposal costs. Comply with clean air environmental regulations.

STRATEGIES:

Convert from VOC-based materials and technology to water-based materials and technology.

ORIGINAL PROCESS:

The majority of office and production wastes were sent to the landfill. Hazardous wastes required special handling requirements and disposal costs. VOCs released during production must be incinerated to convert them to non-volatile compounds. Fueling the incinerators require large amounts of natural gas.

NEW PROCESS:

C&H uses water-based inks in its printing process, also significantly reducing toxic solvent use for most of the press clean ups. The laminating department eliminated VOCs by using a "solids" technology laminator and converted another gravure laminating system to water-based technology. The company encourages customers to return packing materials that can be reused.

RESULTS:

Waste Reduction

Ink VOC content reduced from 60 percent to less than 5 percent.

Totally eliminated VOCs in laminating adhesives.

All waste polyethylene packaging is recycling.

Economics (Information not available.)