

Hallmark Cards Kansas City, MO

Intern: Rylan Ortiz

Major: Electrical Engineering

School: Kansas State University

The Company

Hallmark Cards, Inc. is a privately owned company, supplying over 50% of the US sent greeting cards. Founded in 1910, by J.C. Hall, this company has been in the greeting card business for almost 100 years. Hallmark's main corporate facility employs over 6,500 employees and its surrounding facilities such as the Liberty distribution center and Lawrence manufacturing center employ thousands of workers as well.

Project Background

The layout of the intern project focused on three possible migrations for achieving a "Zero-Free Waste Company". The time spent during the internship can be summed up into these three areas of study/focus: "Waste to Energy (WE) Program," where the intern researched burning waste paper to provide electricity; "Pelletization," where by-products from card manufacturing that could not be initially recycled, would be sent to a sister company to be used in an alternative energy program; and "Improvements and Conservation," where already existing and potentially affordable improvements would help reduce pollution and improve conservation.

Incentives for Change

Hallmark has always been in the market for sustainable business practices. They have been at the forefront for doing what is right with their company even before the EPA was enacted by the White House and Congress in July of 1970. Hallmark decided to have this intern research the feasibility for creating a waste-to-energy (WE) program for their company. They wanted to know the economics and logistics for implementing such a program for their company.

Projects Reviewed for P2 Potential

1. Waste to Energy

Rylan Ortiz researched implementing a waste-to-energy project for Hallmark Cards and concluded that a company like Hallmark would have to hire outside their corporation in order to implement a full scale WE program. Currently the infrastructure is not set up to even consider accommodating this option. The reasons for this are as numerous; however, it can be succinctly said that the main reason for not recommending this program is due to economic issues.

2. Pelletization

Another more viable option for turning waste into energy is the process of pelletization. It is safe to say that Hallmark is very interested in solving their problem with waste materials. Ortiz researched many types of alternative solid fuels (ASF) that could be pelletized for incineration at a cement facility. ASF types of materials need to fit industrial quality criteria. Matching items include cellulose, plastic and textile products. The materials must also be non-hazardous and derive from non-reusable materials otherwise going to landfills. For efficiency purposes, the heat value of 5,000 Btu/lb is required and initial customers who can generate > 200 tons/year are preferred. Ortiz looked at various types of waste generated at Hallmark facilities, including baled shrink wrap, auto flooring trim scrap, air filter paper, plastic film, plastic, buffer pad scrap, waste tissue, paper/paper stock, pre-shredded paper, toner chips, polyurethane waste, rag/paper rolls, tape and label waste, and polypropylene mats.

3. Improvements and Conservation

The Lawrence Hallmark facility employs compressed air in its card manufacturing equipment. Ortiz conducted an air survey at the facility to search for leaks and tag the leaks for repair. Although these leaks are small, they expel a significant amount of sound which the UltraProbe 9000 reads and with the help of a software program, an annual cost can be calculated for leaving the leak from being repaired.

Summary of 2007 P2 intern recommendations for Hallmark Cards			
Project Description	Environmental Impact	Annual Cost Savings	Status
Waste to Energy	Not calculated	Not calculated	Not recommended
Pelletization	Not calculated	Not calculated	Needs further research
Improvements and Conservation (Air Leak Audit)	Not calculated	\$37,200.00	Recommended

