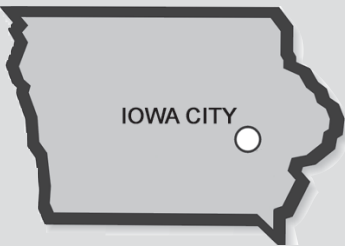


Loparex, Inc.



Loparex Inc. is the largest supplier of silicone based release papers and films. The Iowa City facility has grown from 100,000 square feet and 43 employees to 280,000 square feet and over 200 employees. Some of the many customers that Loparex serves include 3M and Avery. The parent company, ABN AMRO, has shown a serious commitment to environmental conservation efforts and it requires the same of its subsidiaries. The Iowa City plant is ISO 9000 certified and they have shown a continued commitment to improving its environmental impact.

Policarpio Soberanis, Ph.D., Industrial Engineering, University of Iowa

Project Background

Loparex wanted to determine a better outlet for its spent solvents and waste paper that was being generated from its production lines. One objective of the project was to determine a better method of packaging for the paper while maintaining the marketability of the paper to recyclers. A market needed to be determined for the spent solvent as well. Because of the nature of the process, solvents were being mixed. This made it difficult to determine what to market it as. Heat reclamation was also considered as a tertiary project. More research is required to determine if reclaiming heat from one of their thermal oxidizers would be feasible.

Incentives to Change

Loparex and its parent company have shown a strong commitment to environmental awareness. ABN AMRO is listed as number one on the Dow Jones Sustainability Index and they would like to continue to be at the forefront of sustainability issues. With rising fuel costs and depleting natural resources, Loparex is driven to ensure that resources will be available in the future so that the company can remain profitable. Current methods of waste paper and solvent disposal have led the Iowa City facility to believe that changes should be made in order for the company to meet its goal of providing quality product while being environmentally friendly.

Results

Pressboard Recycling

Each shipment of raw stock is shipped with square pressboards attached to the ends to keep them secure during transport. A recycler was contacted to determine the value of the waste. There is no charge from the recycler for taking the scrap. Current savings are from waste disposal costs.

Paper Baling and Recycling

The waste that is generated during the startup process is currently causing problems due to low truck weights and high transportation costs. Different recyclers have been contacted to determine a market for the waste paper. Also, a baler system is being considered to increase the weight of the truck. The level of waste segregation that is required by different recyclers makes the project a difficult one to solve. Several different market possibilities have been identified as well as an appropriate baler supplier.

Solvent Recycling

Chemicals used in the process of coating paper led to many different waste solvents. Loparex currently has a number of different solvents that are being disposed of as hazardous waste. Alternative markets have been considered for the solvents but there have been complications. Solvent distillation has also been considered but the end result is not pure enough to be used by Loparex. Recyclers are currently evaluating the use of the solvents as a fuel additive. This would save on disposal cost as well as the amount of hazardous waste generated.

Heat Reclamation

One of Loparex's thermal oxidizers is being used to heat air up to 1,200 degrees. There have been attempts to reclaim some of the heat but silicone dust has caused problems. Adding filters to the system would lead to inefficiencies that could yield higher energy costs. The manufacturer of the oxidizer was contacted to see if there are any products that can be used to aid in the endeavor.



Green House Gases Diverted
in Tons (CO2 Equivalent)

	Total for all sectors
CO2	257.0
CH4	Included
N2O	Included
CFCS	Included

Project	Annual Cost Savings	Environmental Results	Status
PRESSBOARD RECYCLING	\$2,500	12 tons of solid waste	Implemented
PAPER RECYCLING	\$300,000	150 tons of solid waste	In Progress
SOLVENT RECYCLING	TBD	TBD	Needs further research
HEAT RECLAMATION	TBD	TBD	Needs further research

