

DuPont

CASE
SUMMARY

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DUPONT

Fort Madison, Iowa
Lee County

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The Company

DuPont Inc. is an international company with several facilities and subsidiaries across the United States. The company had \$24 billion in sales in 2002. The Fort Madison plant produces polymers, coatings, paints, inks and thinners.

Project Background

DuPont Inc. has its own pollution prevention standards. The goal of these standards is zero waste generation. DuPont has waste streams that they want reclaimed, reused or recycled.

Incentives to Change

DuPont desires to find a new way to reuse or dispose of its waste tetrahydrofuran (THF). As of now, the THF is shipped out after one use in the polymerization process; this is a large waste of a costly chemical. DuPont is actively searching for a company that could reuse or recycle the THF.

DuPont wishes to reduce the number of supersacks it throws away. DuPont has a supersack return policy with just one company, so many of the bags it uses end up in a landfill. Taking so many bags to the landfill is wasteful and costly, so the reuse of the supersacks is an excellent alternative.

DuPont also wishes to reduce the amount of cardboard that is being thrown away, as the company has an established cardboard recycling program.



Results

The main three opportunities to reduce waste and generate potential savings are:

1. **Waste THF** – Upwards of \$189,000. The first option is to send the non-contaminated THF to Nova Molecular to be cleaned. Cleaning one-fifth of the total THF stream saves \$400 per year in disposal costs. Reuse of the reclaimed THF at the DuPont plant would save an additional \$172,700 per year in purchasing costs. The second option is to send the contaminated THF to BFC Gas and Electric Companies to be used to generate electricity in Ankeny. All of the THF could be processed at BFC.

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2. **Supersacks Reuse Program** - \$140. DuPont has started a pilot return program with Perstorp Chemicals. This return and reuse program will send an estimated 740 bags back to Perstorp to be refilled with chemicals that they can send out again. This program will save DuPont around \$140 annually.

3. **Improved Cardboard Recycling** - \$1,620. DuPont has a cardboard recycling program in action right now, but program improvements are possible. If cardboard bins and signs for the bins are placed in high waste areas, the company stands to save an estimated \$1,620 every year.



Total opportunities for this company can save a combined 27,200 pounds of solid waste from the landfill and 67,000 gallons of hazardous waste can be effectively eliminated through reuse.