

**Schwan's Food Manufacturing, Inc.
Salina, KS**

Intern: Jay Reimer

Major: Biological and Agricultural Engineering

School: Kansas State University

The Company

Schwan's is one of the largest providers of branded frozen food in the world, and their Salina, Kansas plant specializes in frozen pizza.



Project Background

One of the factors affecting a business' reputation is its management of wastewater and air emissions. There are many waste streams flowing out of the Schwan's Salina plant, but focusing on those waste streams with the most significant environmental or financial impact is most important. Reimer's internship involved two different projects: the "Waste Water Treatment Plant (WWTP) Chemical Room Audit" and the "Waste Control Project".

Incentives for Change

The Schwan's pizza plant in Salina is the largest user of the landfill in Saline County. Schwan's believes focusing on the environmental impact of its operations is not only good for the environment, but also provides the company with a competitive advantage for every additional sustainability program implemented.

Projects Reviewed for P2 Potential

1. Waste Water Treatment Plant Chemical Room Audit

Schwan's sends nearly 5,300 aerosol cans per year to the landfill. If Schwan's enacts a recycling program for aerosol cans they can receive \$90 a year from the recycling company and divert 1,600 pounds of waste from the landfill. Schwan's currently disposes of their batteries through *Safety-Kleen*, but Reimer recommended that they participate in the *Rechargeable Battery Recycling Corporation* program instead.

2. Waste Control Project

Schwan's throws away an estimated 1.9 million pounds of crust each year. Reimer researched two ways to reuse the crust: producing ethanol and producing animal feed. Both of these options would require purchasing expensive equipment, but they would provide a revenue source of approximately \$160,000 per year and eliminate crust waste. Reimer recommended conducting more research before deciding if these are viable options for Schwan's. Another waste Schwan's produces is 4,700 pounds of solvent per year. *Safety-Kleen* currently works with Schwan's to dispose of this. Reimer recommended that Schwan's join *Safety-Kleen's* continuous use program in order to decrease the hazardous waste they generate and allow their old solvent to be reused. Schwan's also uses Styrofoam products in their break rooms which get deposited in the local landfill. Reimer researched two machines that will turn this Styrofoam into a recyclable material. This will help eliminate 3,500 cubic feet per year of Styrofoam waste.

Summary of 2007 P2 intern recommendations for Schwan's Food Manufacturing, Inc.

Project Description	Environmental Impact	Annual Cost Savings	Status
Battery Recycling Program	Reduce 47 lbs/year of hazardous waste	Minimal	Implemented
Aerosol Container Recycling	Reduce 1,593 lbs/year of solid waste	\$86.00	Implemented
Waste Crust/Dough to Ethanol	Reduction of 950 tons/year of solid waste	\$160,000	Needs Further Research
Styrofoam Recycling	3,500 cubic feet per year	Not calculated	In progress
Parts Washer Solvent	Reduce 3,000 lbs/year of hazardous waste	Minimal	Implemented



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