## Project Overview

Omaha, NE

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| Major: | Industrial Engineering |
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## Lozier

Lozier is a leading manufacturer of retail store fixtures in both national and international markets. Headquartered in Omaha, Nebraska, Lozier has manufacturing facilities in Alabama, Missouri, Utah, and Pennsylvania that provide its customers with a wide variety of front room display fixtures and back room storage systems. These designs range from heavy-duty steel storage shelving to refined wood counters and showcases. Within the Omaha area, both the West Plant and the North Plant fabricate these items from bare, stock steel and wood to finish, when they are painted, packaged and sent to the customer.

## Project Description

The 2005 summer intern project involved Lozier's nationwide system of 13 powder paint lines. Three primary facets of paint waste minimization were investigated,

1. Additional Reclamation of Paint
2. Establishing Standards for Painting Proper Powder Coat Thickness
3. Minimizing Line Gaps

In addition to the paint waste minimization topic, two parts washer services were compared and analyzed to see which would provide the most sound management practices. Finally, the battery change cell in the Distribution Center was analyzed in an effort to eliminate the discharge of battery acid water.

## Pollution Prevention

Since the North Plant alone uses 1.8 million pounds of powder paint and disposes of approximately 229,000 pounds per year, the pollution prevention benefits from addressing waste paint will have significant impact and opportunities can be translated to each of the 13 paint lines across Lozier nationally. Recommendations included improving paint reclaim procedures, assuring painting with optimal mil thickness, and minimizing line gaps. Another project was finding a parts-washer service that generates no waste thereby reducing of waste disposal liability and eliminating one waste stream. Lastly, a project to prevent battery acid water spills stops the generation of hazardous waste, protects the employees working in or around the battery change cell and ensures that Lozier maintains its status as SQG.

## Results

For the powder paint projects, pollution prevention solutions were implemented so that 10 additional colors could be reclaimed, painters could paint at the optimal mil thickness at the beginning of every product and color change through the use of gun settings templates and hook setters could efficiently set the pace for the line. In addition, parts washers were to eliminate the parts washer waste stream and battery acid water spill prevention measures were recommended. The details of these suggestions are given in Table1.

**Table 1. Pollution Prevention Opportunities and Results**

| Pollution Prevention Opportunity | Annual Waste Savings (lb.) | Annual Cost Savings |
|---|---|---|
| Reclaiming 2 contaminated colors | 10,924 | $33,134 |
| Reclaiming top 3 metallic & wrinkle colors | 20,349 | $67,717 |
| Reclaiming 1/2 of remaining 5 metallic & wrinkle colors | 8,062 | $30,511 |
| Maintaining optimal powder coat thickness | Not Quantifiable | Not Quantifiable |
| Minimizing line gaps | Not Quantifiable | Not Quantifiable |
| Switching parts washer services | 4,480 | |
| Preventing battery acid water spill | 17,642 | |
| **TOTAL** | **61,457 lbs.** | **$131,362** |

*NOTE: ( * ) Denotes a hazardous waste*