

Project Overview

Industrial Assessment Team Intern: James Dalton

Major: Biological Systems Engineering

School: University of Nebraska-Lincoln



Industrial Assessment Team

During the summer of 2010, James Dalton worked with an Industrial Assessment Team comprised of three interns who conducted reassessments of previous projects and provided technical assistance (waste assessments and pollution prevention projects) for a variety of businesses. He participated in assessments and projects that were conducted in industries such as vehicle maintenance, clinical research, transportation refrigeration, surface manufacturing, ethanol production, and distribution. Additionally, he completed two reassessments at a hospital and a call center. Projects were located in Lincoln, Omaha, and Fairmont, Nebraska.

Project Descriptions

James Dalton took the lead on three new assessments—one being a general waste assessment, and the other two being client-specified projects. The opportunities researched and recommended included performing compressed air system leak audits to reduce energy consumption, switching from aerosols to reusable spray cans to decrease solid waste, training employees to be more efficient in certain operations, in-process recycling, and wash water capture for water conservation and ground pollution prevention.

Pollution Prevention Benefits and Results

The potential benefits and results of those projects are summarized in Table 1 below. Clients can expect the following benefits if recommendations are implemented.

Table 1. Pollution Prevention Recommendations and Potential Benefits

P2 Opportunity	Estimated Yearly Savings/Reductions	Intangible Benefits
Modify Compressed Air System	-\$1,160 -23,200 kWh	-Reduces GHG emissions
Replace Aerosol Cans	-\$900 -730 lbs Solid Waste	-Improves employee safety
In-Process Recycling	-\$64,000 -1,650 lbs Solid Waste	-Reduces material purchase frequency -Improves employee morale
Increase Refrigeration Unit Efficiency	-\$76,000 -1750 Ground-Polluting Releases -Saves 35,000 gallons of diesel fuel	-Improves customer relations -Reduces GHG emissions
Total Savings (including impacts from recommendations not shown in this table)	-\$142,000 -23,400 kWh -2,400 lbs Solid Waste -1750 Ground-Polluting Releases	-Reduce GHG emissions by nearly 400 metric tons CO2 equivalents/year