Project Overview

Industrial Placement Intern: Holly Lohmeier
Major: Industrial and Management Systems Engineering
School: University of Nebraska- Lincoln

Company Background

Orthman Manufacturing of Lexington, Nebraska is an agricultural equipment manufacturer. Orthman's broad North American OEM (Original Equipment Manufacturer) clientele utilize Orthman toolbars and guidance components on major manufacturer planters and harvesting equipment. These components are all entirely manufactured by Orthman at one of three local factories. Orthman tillage, grain handling, guidance, and earth moving equipment can be found throughout the world ranging from the cotton fields of Australia, to the sugar cane fields of Columbia, to road construction in Denmark, and of course, all major agricultural markets throughout the United States.

Project Description

In the summer of 2010, the Quality and Operations departments sought assistance from the Partners in Pollution Prevention (P3) program in reducing the electricity and natural gas bills. Intern Holly Lohmeier completed a full-time placement with Orthman. A power profile device was connected to the power panels at the north plant and all billing history was analyzed. Suggestions to reduce the utilities as well as cost associated with them were found and are documented in a complete report to management.

Pollution Prevention Benefits:

The following table highlights the most important suggestions made, including the potential cost savings and environmental impact of implementing those suggestions.

Table 1. Potential Cost Savings and Environmental Impacts of Suggestions

Pollution Prevention Category	Annual Cost Savings	Annual Resource Savings
Electricity	$24,750	74,770 kWh
Natural Gas and Propane	56,900	49,060 Therms
Materials and Supplies	4,110	79.880 pounds
Total	**$85,760**	

Using less energy and fewer materials saves money and reduces greenhouse gas emissions related to the generation of electricity and the processing of materials. Implementing the recommendations resulting from this project could result in the potential reduction of greenhouse gas emissions by over 400 metric tons of carbon dioxide equivalents per year.