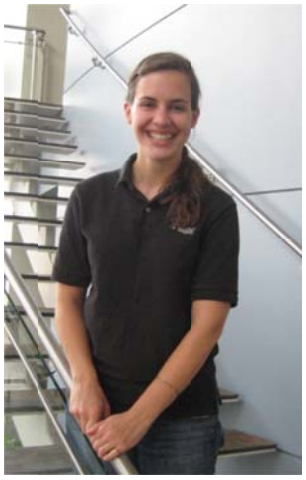
Project Overview



Industrial Placement Intern: Lauren Swadener
Major: Civil Engineering
School: University of Nebraska at Omaha

Company Background

The first Zimmatic® pivot was built by the Zimmerer brothers in 1969, and from there the center pivot manufacturing business grew to become Lindsay Corporation today. They pride themselves in manufacturing the entire product from the input of rolls of steel, welding and galvanizing, assembling electric and motor controls, to the output of their finished center pivot left unassembled to be shipped to customers. Lindsay Corporation has also diversified its manufacturing business in many ways to make optimal use of production capacity.

Project Description and Benefits

In the summer of 2010 Lindsay partnered with Lauren Swadener, their third intern through the University of Nebraska at Lincoln's Partners in Pollution Prevention (P3) program, to research opportunities to reduce electricity usage. Opportunities were identified that could result in cost savings, reduced electricity use, and waste reduction. Making lighting in certain areas more efficient could also reduce solid waste and hazardous mercury and reduce greenhouse gas emissions. The potential benefits from implementing project recommendations are displayed in Table 1 below.

Table 1: Summary of Potential Pollution Prevention Opportunities

Opportunity	Annual Cost Savings	Annual Waste Reduction	Reduce GHG (MT CO2E)	Other Benefits	Payback Period
Building 3 Lighting					
Replace High Bay with T5 Fluorescent	$21,000	380,000 kWh 2,300 mg Mercury	363	Better Quality Light Less Accidents Increased Productivity	1.8 yrs w/ incentives
Replace Workspace with T8 Fluorescent	$140	2,700 kWh 180 mg Mercury	2	Better Quality Light Less Accidents Increased Productivity	6.4 yrs
T12 Office Lighting throughout Lindsay					
Replace T12 with T8 Fluorescent	$8,700	108,000 kWh 340 mg Mercury	103	Better Quality Light Increased Productivity	0.6 yrs
Lighting in Select Offices, Conference Rooms, Bathrooms, and Break Rooms					
Install Select Occupancy Sensors	$2,800	50,000 kWh	48	Easy to Implement Provides Safety	1 yr
Vending Machines					
Install Vending and Snack Misers	$1,900	33,000 kWh	31	Still keeps drinks cold while saving energy	1.4 yrs
De-lamp Vending Machines	$200	3,000 kWh	3		
Approximate Total	**$34,700**	**580,000 kWh 2,800 mg Mercury**	**550 MT CO2E**		**2.2 yrs**