## PROJECT OVERVIEW

Intern: Maggie Lock
Major: Industrial Engineering
School: Kansas State University

### SUMMER PROJECTS

Waste assessments were conducted within a variety of industries, including aerospace and defense, steel manufacturing, air filtration, and healthcare. The locations of the facilities ranged from Lincoln and Cortland to Omaha and Columbus. Tasks consisted of energy conservation practices, compressed air system analysis, and recycling options, as well as a reassessment of a previous intern's project and assisting Industrial Placement and Small Business interns as needed.

### WASTE ASSESSMENT

One reassessment was performed at a composites manufacturing company in Lincoln that had a P3 intern in 2003. The purpose of the reassessment was to evaluate the implementation status of the pollution prevention suggestions offered by the intern and the impact of the suggestions on the business. Two new assessments were conducted, one for another composites manufacturing facility in Lincoln and the other at a steel manufacturing facility in Columbus.

### RESULTS

Some of the recommendations provided in the management reports include:

- Repairing leaks in the compressed air system
- Replacing the current air compressor with a newer, more efficient model
- Installing air curtains at roll-up doors in a dock area

Table 1 summarizes the pollution prevention opportunities suggested to the industrial clients and the potential benefits to be realized from implementation.

Table 1. Pollution Prevention Opportunities and Benefits

| Pollution Prevention Opportunity | Estimated Savings | Potential Benefits |
|---|---|---|
| Repair Leaks in Compressed Air System | $10,000/yr<br>200,000 kWh/yr | o Cost savings<br>o Reduce electricity usage<br>o Reduce compressed air system load |
| Replace Main Air Compressor | $14,000/yr<br>280,000 kWh/yr | o Cost savings<br>o Reduce electricity usage<br>o Improve partial load system efficiency |
| Install Rain Sensor | $113/yr<br>71,625 gal water/yr | o Utility savings<br>o Reduce water usage<br>o Promote company image |
| Install Air Curtains at Dock Doors | $22,000/yr<br>2,500 Mbtu/yr | o Reduce heating costs<br>o Reduce energy consumption<br>o Improve work environment |