



Project Overview:

Industrial Placement

Intern: Tom Soucie

Major: Industrial Engineering

School: University of Nebraska Lincoln

Company:

Molex Incorporated is one of the world's largest manufacturers of electronic connectors for automotive and other technological industries. Molex of Lincoln employs over 1,000 workers in three different facilities known as Upland, West Bond and Progressive. The Upland facility, located at 700 Kingbird Road, Lincoln, NE 68521, is one of Molex's largest plants and contains plating, stamping, plastic injection molding, and assembly departments. Molex is committed to minimizing the environmental impact of operation, and has proven that through their ISO 14001 certification and the continued use of the Partners in Pollution Prevention (P3) program.

Project Description:

In order to reduce the amount of waste produced around the facility, solid waste streams were studied to determine recommendations for minimizing these wastes. First, alternatives for many of the aerosol can products were identified. Also, recommendations were made to increase cardboard recycling, increase storage through pallet shelving, and identify a new recycling vendor. Last, the compressed air system was studied and a recommendation was made to reduce the line pressure to reduce electricity use.

Pollution Prevention Benefits:

By implementing the suggestions made, Molex will reduce the environmental impact of its operation. Over 2,200 empty aerosol cans, which is equivalent to 945 lbs pounds of hazardous waste, will be diverted from hazardous waste processors. This results in nearly \$4,000 annual purchase and disposal savings. Additionally, regulatory burden will be reduced and the amount of greenhouse gases released will be reduced. By making sure all cardboard is recycled, increasing storage with pallet shelving, and finding a new recycling vendor, Molex could avoid sending nearly 628,000 pounds to landfill annually as well as increase savings by over \$43,000 each year. Finally, reducing the compressed air system pressure will result in reducing electricity use by over 340,000 kWh/year, realizing over \$14,000/year savings.

Results:

| Recommendation: | Quantity Reduced: Yearly | Yearly Savings |
|------------------------|--------------------------------------|-----------------------|
| Aerosol Replacement | 945 lbs (Hazardous Waste) | \$3,980 |
| OCC Recycling | 19,500 lbs (Solid Waste) | \$1,140 |
| Pallet Shelving | 159,208 lbs (Solid Waste) | \$10,784 |
| New Recycling Vendor | 448,830 lbs (Solid Waste) | \$31,418 |
| Reduced Air Pressure | 340,171 (kWh) | \$14,253 |
| Totals: | 628,483 lbs & 340,171 kWh | \$61,575 |