Project Overview

Industrial Assessment Team

The Industrial Assessment Team was a group of four interns (Aaron Ratigan, David Hanson, Sam Ghormely and Tanner Gosda) which performed waste assessments and provided P2 recommendations for the following manufacturers over the course of the summer:

- Neapco in Beatrice, NE
- Hughes Brothers in Seward, NE
- University of Nebraska-Lincoln Machine Shop
- Omaha Steel Castings in Wahoo, NE
- Tyson Beef Packing in Lexington, NE

Project Description

Aaron worked as a member of the Industrial Assessment Team, focusing on specific areas at each of the manufacturers assessed. The bulk of Aaron's work in the three manufacturers assessed in depth (Neapco, Hughes Bros and the UNL Machine Shop) was focused on process cooling and employee comfort in the summer and winter months. At Neapco, Aaron assessed electrical use relating to ventilation, especially fans used to improve employee comfort during the summer months. At the UNL Machine shop, the use of cooling water in the wire EDM was assessed. Finally, two different space heating methods were compared at Hughes Bros: forced air steam heating was compared to natural gas-fired infrared radiant heating.

Aaron also assisted with projects led by other students working with the IAT. At Omaha Steel, he assisted Sam Ghormely in the initial assessment and in transporting samples of casting sand to testing, and at Tyson, he assisted Tanner Gosda in data collection involving ultrasonic water meters.

Pollution Prevention Benefits

The following table illustrates the potential monetary and energy savings for the recommendations provided to each manufacturer:

Manufacturer	Cost Savings per Year	Electricity Saved per Year	Natural Gas Saved per Year	GHG Reductions per Year
Neapco	**$800**	**12,000 kwh**	**-**	**13 MT CO_2e**
Hughes Bros	**$44,000**	**-**	**36,000 therms**	**190 MT CO_2e**
UNL Machine Shop	**$500**	**7700 kwh**	**-**	**7.5 MT CO_2e**
Totals	**$45,000**	**20,000 kwh**	**36,000 therms**	**210 MT CO_2e**