Project Overview

Industrial Assessment (IA) Team
Intern: Chad Cecrle
Major: Civil Engineering
School: University of Nebraska-Lincoln

Summer Projects

The 2005 summer projects included two new projects and one reassessment. Those projects were conducting a waste assessment at Behlen Manufacturing in Columbus, Nebraska, conducting research on compost as an erosion control method, and completing a reassessment of Eaton Corporation, in Hastings, Nebraska. Note that the compost research was not funded through the P3 Program, however there are P2 opportunities that can be seen from this research.

Pollution Prevention Benefits

A waste assessment was completed for Behlen Manufacturing at the request of an Industrial Placement intern who worked there during the 2005 summer. The opportunities that were identified at Behlen included recycling cardboard and scrap metal, storing waste powder paint indoors to prevent groundwater contamination from the accidental breakage of the cardboard storage barrels, and insulating various ovens and tanks to prevent energy loss.

The P2 benefits of the compost erosion control project were that compost can be used instead of a straw mat on construction sites and will provide less runoff and sediment loss from rainfall events. The decrease of sediment loss will save money from the costs of cleaning up lakes, sewers, and lawns.

Results

Solutions were suggested that would save Behlen approximately $29,000 per year in energy savings and $250 in disposal costs. The insulating of ovens and tanks on the process lines in Behlen would provide 1,070,000 KWH saving per year. Recycling all metal scrap, in a one time clean-up, would save several tons of scrap metal from entering the landfill, while providing a clean and safe yard. Lastly, storing the waste powder paint indoors would provide a spill prevention containment of approximately 10,000 pounds. Table 1 summarizes the opportunities and the results for the pollution prevention.

Table 1: Pollution Prevention Opportunities and Results

Pollution Prevention Opportunity	Quantification	Annual Cost Savings
Insulation for Energy Savings	1,070,000 KWH	$29,000
Spill Prevention	10,000 Pounds	
Recycling Cardboard and Scrap Metal	Several Tons	$250