



**Intern:** Baron Huntwork  
**Major:** Biological Systems Engineering  
**School:** University of Nebraska-Lincoln

**Background**

Thermo King in Hastings, NE primarily manufactures refrigeration units for large trucks, small trucks, and buses. Thermo King is part of Ingersoll Rand Corporation which also owns companies such as Club Car and Trane. The Hastings facility also has a few other assembly lines that build more specialized units including Tripac, Tripac-E, Heat King, and an eventual rail unit. Along with the main assembly lines, they also have “feeder” areas that include powder paint, sheet metal, and welding. Thermo King is very concerned with sustainability and their environmental impact, and they have made significant steps already to reduce their environmental footprint.

**Project Description**

Baron Huntwork, a Partners in Pollution Prevention intern, assessed and made several recommendations during the summer of 2018. The main goal of the intern was to reduce Thermo King’s water use and wastewater discharge. The intern also placed a heavy focus on the paint system at Thermo King, as it was experiencing problems during the summer of 2018.

**Pollution Prevention Benefits:**

The P3 intern identified several pollution prevention opportunities that were cost-effective and would allow Thermo King to become more energy efficient. While the intern’s main focus was water use, the majority of cost savings come from improvements in the paint and compressed air systems. Table 1 below outlines the total savings that would be made if the intern’s recommendations were implemented.

**Table 1.** Pollution Prevention Benefits

Assessment Recommendation	Annual Cost Savings	Material Use Reduction	Other Reductions	GHG Reduction (MTCO <sub>2</sub> e/yr.)
General Assessment	\$14,000	3,800 lbs. of paper towels not entering land fill	200,000 electricity kWh/yr	220
Water/Wastewater Assessment	\$13,000	3,700 lbs. of salt saved	1,170,000 water gallons/yr	-
Paint System Assessment	at least \$30,000	-	Reduction of 3,700 reject parts	24
<b>Total</b>	<b>\$57,000</b>			<b>244</b>