

**Frito-Lay  
Topeka, Kansas**

*Intern:* Curtis Leiker  
*Major:* Biological and Agricultural Engineering  
*School:* Kansas State University

***The Company***

“The Frito Company” and “The H.W. Lay Company” merged in 1961 to form Frito-Lay. The Topeka plant, a 750-person operation, opened its current location in 1971. The Topeka plant has 11 production lines producing 14 different types of chips for a total of 134 million pounds of product annually.



***Project Description***

Curtis Leiker's project focused solely on water usage within the facility. A line-by-line breakdown of water usage was created in order to compare actual usage with the company standards. Doing this made it easier to see where the greatest potential for water conservation was and to keep track of where the water was being used. Before Leiker arrived, Frito-Lay kept track of how much water they used but did not know where it went in the plant.

***Incentives for Change***

Frito-Lay of Topeka has been on the top of the list in comparisons of all 39 company plants in the United States when it comes to the potential savings of water. In 1999, the ratio of gallons of water used to pounds of finished product was 2.19 gal/lbs and in 2006, it was down to 1.17 gal/lbs. The ultimate goal is to reduce this ratio to 0.81 gal/lbs. If this goal is reached the Topeka plant will save approximately \$200,000 per year.

***Projects Reviewed for P2 Potential***

***Production Line Water Reduction***

Leiker completed a line-by-line breakdown of the water usage in order to compare actual the actual usage with company standards. Leiker measured the flow rates of the water by sticking rubber tubes over the nozzle and allowing the water to run into a calibrated bucket for one minute. This allowed him to measure the flow in gpm and then compare the number with company standards. The main area of savings occurred in water that was running at a higher gpm than recommended. Leiker also recommended using recycled water in several locations across the plant. After completing measurements on all 11 production lines, Leiker identified seven areas for water usage reductions. All seven of these recommendations were immediately implemented by Frito-Lay. The potential savings is 11.41 million gallons of water and \$56,637 annually.

<b>Summary of 2007 P2 intern recommendations for Frito Lay</b>			
<b>Project Description</b>	<b>Environmental Impact</b>	<b>Annual Cost Savings</b>	<b>Status</b>
Production Line Water Reduction	Reduce water use by 11,410,000 gallons/year	\$56,637.00	Implemented