Osceola Foods, LLC

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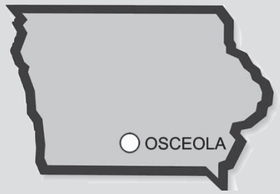

Osceola Foods LLC. is a subsidiary of Hormel Foods Corporation, a Fortune 500 company based out of Austin, Minnesota, and a longtime leader in the meat processing industry. Hormel has both domestic and international production facilities, as well as a worldwide market share. Osceola Foods was established in 1995 and produces ham and bacon products. Currently, Osceola Foods is the only producer of Hormel's Natural Choice line of preservative free meats.

Project Background

In accordance with Hormel's environmental policy statement, Osceola Foods strives to be an environmentally responsible member of the community. As the community's leading employer and the consumer of half of the city's water flow, Osceola Foods continues to explore for self-improvements that result in superior environmental performance.

Incentives to Change

Osceola Foods strives to minimize its wastewater discharge levels and reduce the costs associated with wastewater treatment. In the past this has been a challenge during months of high production. Osceola Foods believes that with a change in treatment chemicals as well as improved cleaning processes on the production floor, these goals will be easily met.

Results

Pretreat Trial

H2O Tech was selected to conduct a 90-day trial with the wastewater treatment operations. This trial introduced a new regimen of chemical and biological treatments that should decrease the levels of Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS). This new chemical/biological regimen allows for a greater pH range in treatment, so less sodium hydroxide (caustic) and sulfuric acid were needed to control the pH in the dissolved air flotation (DAF) unit. This will result in a chemical savings of 260,000 pounds each year and cost savings of $55,000 annually.

Cooling Water Recirculation

While conducting a water balance of the plant, it was found that much of the equipment was running higher flows of cooling water than the design specifications recommend. By adjusting these flows to specifications, 464,000 gallons of water can be conserved each year. It was also discovered that many production lines could be combined for closed loop chilling. This would save 9.3 million gallons of water for a total of $90,000.

Capture of Make-up Water

Many cleaning systems in the plant recirculate cleaning water and have a float scheme that adjusts for make-up water. It was discovered that significant amounts of water flow over the storage sumps, which then requires make-up water. It was suggested that the overflow and float schemes are evaluated as there is a possibility for conservation of 7.3 million gallons of make-up water each year.

Caustic Recovery System

As part of the 90-day trial with H2O Tech, a one week caustic recovery trial was performed. In this trial, caustic water was taken from the wash cabinets and run through a clarifier to remove any solids. The recovered caustic water, nearly 90 percent of what entered the clarifier, could then be returned to the wash cabinets where additional raw caustic would be added in order to maintain a proper strength. The results of this trial are still being evaluated.

Solids Recycling

Osceola Foods currently has a rather extensive recycling program in place; however, several items were identified as possibilities for solids recycling. Used alkaline batteries are currently sent to the landfill. As these items do not constitute a large quanity of waste, it has been difficult to evaluate the savings. Vendors have been contacted, but a cost-effective route is yet to be found.

Project	Annual Cost Savings	Environmental Results	Status
PRETREAT TRIAL	$58,000	260,000 lbs. less chemical consumed	Implementation in progress
COOLING WATER RECIRCULATION	$90,537	9.8 million gallons of water	Recommended
CAPTURE OF MAKE-UP WATER	$47,900	7.3 million gallons of water	Recommended
CAUSTIC RECOVERY SYSTEM	More research needed	110,500 gallons of water	In trial stage
SOLIDS RECYCLING	More research needed	480 pounds of alkaline batteries diverted from landfill	Recommended