

Project Overview



Industrial Placement Intern: Brenna Wright

Major: Biological Systems Engineering

School: University of Nebraska-Lincoln

Company Background

Zoetis is the largest animal healthcare company globally, and their site in Lincoln, NE is the largest animal healthcare manufacturing site in the world. There are approximately 900 Zoetis colleagues at the Lincoln site, and the facility develops and manufactures vaccines, pharmaceuticals, and diagnostics for livestock and companion animals. The company has a large focus on sustainability and has developed a Driven to Care sustainability initiative that was launched in 2021.



Project Description

During the summer of 2022, Brenna Wright, an intern from the P3 program at UNL, investigated several pollution prevention opportunities for Zoetis in Lincoln, Nebraska. Some of the goals of the summer projects were to increase sustainability by improving energy efficiency and reducing the volume of hazardous and solid wastes generated by the site.

Pollution Prevention Benefits

There were three sustainability projects that were investigated for their pollution prevention benefits during the summer of 2022. The first was assessing the recyclability of foil waste from blister pack production. It was determined that because the foil was composed of both paper and metal foil, it could not be recycled for its materials, but it could be recycled as a waste to energy material. The second was assessing the compressed air system in the facility. It was recommended that Zoetis purchase an ultrasonic leak detector to locate and repair the compressed air leaks to increase the energy efficiency of the site. The last project investigated was an evaporator to reduce the volume of hazardous/special waste generated from the equipment rinses in pharmaceutical production.

Results

The pollution prevention benefits and results for each project are summarized in Table 1:

Table 1: Summary of Pollution Prevention Benefits and Results

Project	Cost Savings	Tangible Benefits	Other Benefits
Blister Pack Foil Recycling	NA	8,700 lbs./year waste diverted from landfill	4.5 MTCO ₂ emissions avoided
Compressed Air Leak Detection	\$25,000/year	618,000 kWh/year saved	438 MTCO ₂ emissions avoided
Evaporator for Pharma Waste	\$83,000/year	420,000 lbs./year hazardous/special waste reduction	25 MTCO ₂ emissions avoided
TOTAL	\$108,000/year	---	467 MTCO₂e