## Project Overview

(Pictured on far right)

**NIAC Intern:** Reid Stutzman
**Major:** Mechanical Engineering
**School:** University of Nebraska-Lincoln

**Industrial Assessments**

- Vishay-Dale Electronics
- Norfolk Wastewater Treatment Plant
- ASSA ABLOY (Curries)
- Noah's Ark

Throughout the course of the summer, I completed 4 assessments for the University of Nebraska Lincoln's Industrial Assessment Center (NIAC). These trips consisted of traveling to facilities in Columbus, NE; Norfolk, NE; Mason City, IA; and Hastings, NE. I served as analyst, safety manager, equipment coordinator, and lead analyst on these assessments, respectively. The goal of each facility assessment was to identify specific assessment recommendations (ARs) that could be implemented to reduce overall operating costs and utility consumption. Table 1 highlights the recommendations I worked on with the potential savings, capital investment, and simple payback associated with each AR.

**Table 1:** Recommendations Summary

| Assessment Recommendation | Resource Savings (unit/year) | Cost Savings ($/year) | Capital Investment | Simple Payback (years) |
|---|---|---|---|---|
| Upgrade Main Facility Lighting | 246,660 kWh/year<br>474 kW/year | $21,058 | $52,136 | 2.2 |
| Lighting* Management System | 59,411 kWh/year | $2,733 | N/A | N/A |
| Pre-Air Decommisson* | 326,617 kW/year<br>447 kw/year | $20,313 | $716,000 | 35.2 |
| Upgrade Facility Exit Signs | 3,154 kWh<br>51.84 kW | $451 | $816 | 1.8 |
| Dewatering Press | 21,000 lbs of paunch mass | $41,996 | $175,000 | 4.2 |
| **TOTAL** | - | $63,505 | $227,952 | AVG: 3.4 |

*Recommendation was downgraded into other measures for various reasons to do unavailable implementation costs, or because the payback period was higher than desired. These values did not get factored into total or average values.