FINAL REPORT
ESA-033-2 Schreiber Foods - Smithfield Plant
PUBLIC REPORT

Introduction:

Headquartered in Green Bay, Wis., Schreiber is a privately held dairy company with sales in excess of $3 billion. Its products – which include process, natural, cream and specialty cheese and yogurt – are sold primarily through customer brand distribution programs.

The ESA occurred at the Smithfield, UT facility. This facility produces dairy products. The facility represents the state-of-the-art production technology and equipment.

Objective of ESA:

The objective of the ESA was:

1. Introduce the PHAST program to plant personnel.
2. Determine the applicability of the PHAST program to plant process and equipment.
3. Train plant personnel on the use of the PHAST program as required to apply it to a real world application(s). During this phase access the strengths and weakness of the analysis and develop methods to ensure and accurate outcome.
4. Facilitate a discussion of fuel savings opportunities among the participants.
5. Identify and quantify specific energy savings opportunities. Estimate required resources. Focus on projects that fall within the corporate payback targets.

Focus of Assessment:

The ESA focused on heating water.

Approach for ESA:

Working with plant personnel, we altered the agenda to obtain the most valuable outcome. In brief, the process went as follows:

Discussed with key personnel the overall process and provide plant personnel time to determine the best target(s) for the analysis. This included:

1. Personnel and Process Introductions – people and job functions
   A. Discuss the ESA and Save Energy Now program
   B. Discuss plant expectations and objectives – target equipment to be analyzed
   C. Review the three day schedule. Revised to accommodate plant personnel schedules
   D. Toured the facility and discussed how energy is used in the various processes.

2. Target Equipment Identification
   - Identify which process heating device(s) will be used for the assessment. Suggested criteria includes:
     A. The equipment type should represent a significant use of energy.
     B. There should be a means to collect operating data from the equipment that will be entered into the PHAST program for analysis. (This requirement was largely ignored for this assessment)
     C. Participants should suspect the machine represents significant energy savings opportunities.

Approach for ESA (con):

Improved insulation was discussed briefly. While opportunities exist to reduce heat loss, pipe insulation must be sealed and suitable for wash down to prevent bacteria growth in the interstices created by some insulation systems. Because of this issue, little time was spent on insulation opportunities.

3. Discuss data collection techniques and tools. Reviewed the basic tool kit provided by the ESA Specialist.

4. Reviewed the PHAST program. Demonstrated other features of the program.

5. Created a spreadsheet to summarize information.

6. Perform "what if" analysis for various energy savings opportunities. Compared simple payback periods for alternately heating the water in question with a direct contact water heating system. Discussed the need for additional metering of steam and natural gas within the facility to improve the quality of energy savings estimates.

General Observations of Potential Opportunities:

Medium Term opportunities:

1. Install a Direct Contact Water Heater to provide the primary means to heat water. The total cost of this project was estimated to be approximately $ 260,000.

Management Support and Comments:

The proposed project, direct contact water heating will result in energy savings. Additional measurement and analysis will be required to finalize the savings estimates.